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Parliamentary Papers.
ACCOUNTS AND PAPERS:
THIRTY-SEVEN VOLUMES.

— (9.) —

HEALTH OF THE NAVY.

Session

9 February — 21 August 1871.

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1871.

THIRTY-SEVEN VOLUMES:—CONTENTS OF THE NINTH VOLUME.

N.B.—*THE* Figures at the beginning of the line, correspond with the N° at the
of each Paper; and the Figures at the end of the line, refer to the MS. Paging
the Volumes arranged for The House of Commons.

HEALTH OF THE NAVY:

4. Statistical Report on the Health of the Navy, for the Year 1869 - p. r
-

NAVY (HEALTH).

RETURN to an Order of the Honourable The House of Commons,
dated 25 July 1871 ;—*for*,

A C O P Y

OF THE

STATISTICAL REPORT

ON THE

HEALTH OF THE NAVY,

FOR THE YEAR 1869.

(Mr. Goschen.)

*Ordered, by The House of Commons, to be Printed,
26 July 1871.*

TO
THE RIGHT HONOURABLE
THE FIRST LORD OF THE ADMIRALTY,
&c. &c. &c.

Sir,

I HAVE the honour to lay before you the accompanying Report of the Health of the Navy for the year 1869, to which several Papers in connection with the Naval Establishments and the Naval Medical Service are appended.

I have the honour to be,

Sir,

Your most obedient Servant,

A. ARMSTRONG,

Director General.

(v)

TO
THE DIRECTOR GENERAL
OF THE
MEDICAL DEPARTMENT OF THE NAVY.

Sir,

I HAVE the honour to submit the Statistical Report of the Health of the Navy for the year 1869.

Compared with the preceding year, there was a slight reduction in the ratios of cases entered on the sick-list, and of invaliding, but there was an increase in the death-rate to the extent of 1 per 1,000. This was altogether attributable to the prevalence of yellow fever on the North America and West Indies, and South-East Coast of America Stations, with which unhappily some of the vessels of the squadron employed there were brought in contact.

On the Home Station, although there was a slight increase in the ratio of cases of that form of disease against which the Contagious Diseases Act is directed, the majority of the cases were contracted in places to which the Act does not extend. The medical officers, without exception, bear testimony to the value of legislation in this direction, and, as a rule, advocate its extension.

Measles was extensively epidemic in one of the training ships for boys. The disease was of a mild character, however, and caused no mortality.

In the Mediterranean a rather extensive epidemic of febrile disease occurred in the Caledonia shortly after her being re-commissioned at Malta. The history and nature

of the outbreak is fully detailed in the report on that station.

On the North America and West Indies Station, yellow fever was extensively epidemic. This malignant form of disease appeared in eight or nine of the vessels of the squadron, as the result of communication with infected localities. One hundred cases altogether were entered on the sick-list, of which forty-eight had a fatal termination. This is so much in excess of the average mortality of the disease, that there can be little doubt that many other cases occurred which were, from their less virulent character, classed under some other form of fever.

On the South-East Coast of America Station, yellow fever prevailed at Rio de Janeiro, and attacked some of the crew of the Receiving ship permanently stationed there. Of six cases, four proved fatal.

On the West Coast of Africa and Cape of Good Hope Station, the benefits derived from removing the vessels of the squadron to other stations, after a limited period of service, continue to be experienced. Compared with the preceding year, there was a reduction in the ratio of cases entered on the sick-list, to the extent of 248·1; in the invaliding rate, of 19·5; and in the ratio of mortality, of 2·6 per 1,000. The total death-rate on that station for the year 1869 was 10·4 per 1,000, being the lowest on record.

On the East Indies Station cholera created great ravages at Zanzibar. Happily only two cases occurred in the squadron, both of which, however, proved fatal. It is interesting to note, that while this malignant form of disease prevailed so extensively at Zanzibar and on the opposite coast of Eastern Africa, the islands of Nos Beh, Mayotta, and Seychelles enjoyed an entire immunity from the disease, consequent, it is said, on the strict quarantine regulations that were enforced. An interesting account of the Zanzibar epidemic will be found in the report on this station.

It had long been felt that information connected with the
sanitary

sanitary condition of what may be termed the great establishments of the service, viz., the Naval Hospitals, Marine Divisions, and the Dockyards, had never been obtained in such a form as to render it available for a Report of this kind. By your direction, and with the view still further to illustrate all that pertains to the health-state of the Navy, that defect has now been remedied, and interesting reports on those branches of the service will be found in the Appendix.

The adoption of the Nomenclature of diseases recently issued by a joint committee appointed by the Royal College of Physicians, and which has become the standard of classification for the different public services, has rendered some changes necessary in the plan of this Report as compared with those of previous years. The changes, however, are not great, and any temporary disadvantages which they may involve will be amply compensated for by the more scientific basis upon which the new classification is founded, and the greater precision of technical phraseology their adoption is likely to ensure for the future, in the numerous returns from which these Reports are compiled.

I have the honour to be,

Sir,

Your most obedient Servant,

ALEX. E. MACKAY, M.D.

Deputy Inspector General
of Hospitals and Fleets.

Admiralty, Somerset House,
25 October 1871.

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ERRATA IN 1869 REPORT.

Page	20, in table,	<i>instead of</i>	4 cases of apoplexy,	<i>read</i>	3 cases of apoplexy.
"	46, line 46	"	in the station -	"	on the station.
"	89 " 13	"	for Port Royal	"	from Port Royal.
"	93 " 17	"	activism	"	actinism.
"	126 " 40	"	in percussion	"	on percussion.
"	138 " 14	"	longer any question	"	no longer any question.
"	168 " 13	"	Zealous	"	Topaze.

ERRATA IN 1869 APPENDIX.

Page	12, line 41,	<i>instead of</i>	ally	<i>read</i>	allay.
"	33 " 28	"	dyspepsia	"	dyspnœa.
"	56 " 3	"	two cases	"	three cases (scarlet fever).
"	69 " 8	"	does	"	dose.

HOME STATION.

On the various commands comprised in the Home Station in 1869, viz., the Nore, Portsmouth, Plymouth, Queenstown, and the Channel Fleet, sixty-nine vessels were employed—viz., eleven iron-clads; two vessels of the fourth rate; one of the fifth rate; twelve stationary ships; eight drill ships; fifteen coast-guard ships, several of which were iron-clad; six training ships; five steam-vessels; one yacht; two storeships; four training brigs; one gun-vessel; and one gunboat. Of this force the only vessels employed on duties in any way analogous to those on active service on foreign stations, were eleven of the iron-clads and one vessel of the fourth rate, which composed the Channel Fleet. The duties on which the other vessels were employed were various and special. The returns from forty-eight of the vessels were for the whole twelve months, and from the remainder for periods varying from two to eleven months. The mean force corrected for time was 22,100, and the total number of cases of disease and injury entered on the sick-list 19,892, which is in the ratio of 900 per 1,000 of force, being an increase, compared with the preceding year, equal to 8 per 1,000. Of these, 566 were invalided and 153 died, the former being in the ratio of 25·6 and the latter of 6·9 per 1,000. Compared with the preceding year there was an increase in the invaliding rate to the extent of 3·7 per 1,000, and a reduction in the ratio of mortality of ·6 per 1,000.

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The daily loss of service from Section A. of general diseases, which comprises the febrile group, was in the ratio of 1·3 per 1,000; from Section B., which may be said to comprehend the constitutional group, 9·3; from diseases of the nervous system and organs of the special senses, 1·1; of the circulatory system, ·5; of the absorbent system and ductless glands, ·5; of the respiratory system, 3·1; of the digestive system, 1·7; of the urinary and generative system, 3; of the organs of locomotion, ·4; of the cellular tissue and cutaneous system, 7·5; from unclassified diseases, ·4; and from wounds and injuries of various kinds, 6·1. The average number of men daily sick was 846·7, which is in the ratio of 38·3 per 1,000 of force, being an increase, compared with the preceding year, equal to ·6 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

Taken in the order in which they stand in Table I., there were eight cases of small-pox, two of vaccinia, 284 of measles, twenty-four of scarlet fever, one of relapsing fever, four of typhus fever, eleven of enteric fever, 240 of simple continued fever, 111 of ague, nine of remittent fever, three of cholera, three of whooping-cough, ten of mumps,

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mumps, thirty of influenza, and forty-four of erysipelas, under treatment during the year. Of these, two persons were invalidated for simple continued fever, and one for erysipelas; the deaths included one from scarlet fever, one from typhus fever, five from enteric fever, two from simple continued fever, one from cholera, two from erysipelas, and one from diphtheria. As no entry of this latter disease appears on the case table, the original entry was doubtless under another designation.

Measles.—The only vessel in which this disease was extensively epidemic was the St. Vincent, in which there were 238 cases. One or more cases occurred also in the Asia, Boscawen, Britannia, Cambridge, Castor, Implacable, Impregnable, Pembroke, Royal Adelaide, Squirrel, Trafalgar, Valiant, and Victory. In all, the disease proved mild.

The outbreak in the St. Vincent is thus recorded by the staff surgeon* of the vessel:—"An epidemic of measles broke out in the month of May, and first manifested itself on the 3rd of that month in the persons of two second-class boys, one of whom had been on shore at Portsea and Portsmouth on the 22nd, 25th, and 29th of April; the other had been at Gosport on the 18th of the same month. The former boy whilst in hospital was found to be labouring under venereal disease, contracted doubtless when last on shore, when possibly he was at the same time exposed to the contagion of measles; there can be little doubt, therefore, that he first brought the malady on board the ship. It spread rapidly, and attained its culminating point, as regards the numbers affected, on the 14th of the same month in which it made its appearance, and it gradually declined from that date, and disappeared altogether on the 3rd of June, having been exactly of one month's duration.

"The epidemic was of an exceedingly mild character, particularly toward its termination, when it partook more of the nature of a mild influenza. The symptoms which each of the boys, who were chiefly the subjects of the malady, presented in a greater or less degree were shivering, frontal headache and giddiness, pains of the eyeballs, dimness of vision, coryza, sniffings, sneezings, huskiness, or sonorousness of voice, dryness of throat, and in some instances rawness of chest; the pulsations at the wrist ranging from 95 to 120, generally feeble and small; the tongue greyish, being but thinly furred, and invariably moist; the skin generally mottled, or otherwise covered with a genuine rubeolar eruption, most apparent on the face, chest, abdomen, and back. In a certain number, probably forty in all of the whole number affected (234), some degree of epigastric uneasiness, attended with nausea and occasional vomiting, existed. The bowels were generally found to be regular, opened twice daily. In the whole number affected during the epidemic, the rubeolar eruption had appeared in twenty-four when sent to hospital, but this doubtless presents no relative proportion to those in whom it subsequently presented.

"During

* Staff Surgeon Wm. Hoggan.

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"During the prevalence of the epidemic every necessary precaution was taken to prevent a spread of the malady, and eventually with good effect. The ship's company and boys were minutely inspected by me daily at Divisions, the ship was kept clean and well ventilated, and disinfected by means of carbolic acid, which was freely used throughout, and otherwise by means of fuel stoves. The boys were restricted to their playground in Haslar Field, and during their absence for that purpose or for exercise in boats out of the harbour, the ports were thrown open so as to admit of a free current of air throughout the ship. On the return of the boys from Haslar Hospital on the 9th of June and days immediately following, they were, as a precautionary measure, sent and maintained, by Admiralty order, on board Her Majesty's Ship Victoria, anchored at the head of the harbour, until the 14th of June, when they proceeded with others on board the St. Vincent to join the ships to which they were severally appointed, viz., the Endymion, Warrior, and Agincourt. The boys of Her Majesty's brig Ferret, all of whom, after the wreck of that vessel at Dover on the 29th of March, were borne on the books of and victualled on board the St. Vincent, and many of whom had suffered from the malady (measles), were sent to the Boscawen (their mother ship), or otherwise sent on their Midsummer leave of absence. During the holidays which extended from the 11th of June to the 3rd of July, the hold, spirit-room, and, in fact, every nook and cranny beneath the lower deck was cleared out, disinfected, and whitewashed."

There is nothing worthy of observation in connection with the cases of measles occurring in the other vessels.

Small-pox.—There were eight cases altogether of this form of fever in the Home Force during the year, one or two of which were of considerable severity.

Two cases occurred in the Bellerophon. The first appeared while the vessel was at Lisbon, in the person of a man who did duty as postman, and was in consequence often on shore, in the afternoon, remaining for two or three hours. There can be but little doubt that he contracted the disease on shore, but its source could not be traced. There were only two cases under treatment at the time in any public establishment in Lisbon; the city was, indeed, remarkably free from the disease, and the man himself was not aware of small-pox being in any house that he frequented. As soon as the true nature of his attack was realised he was at once sent to the British Royal Naval Hospital at Lisbon, where it proved to be of rather a severe character. The vesicles were exceedingly numerous, although not confluent. There was no hæmorrhage into the vesicles, but epistaxis occurred during the progress of the case, which resulted favourably, although the man was a good deal marked. He had been vaccinated in early life. The second case occurred at Portsmouth, in the person of a seaman who had been in London on leave, and on his return presented himself with febrile symptoms. On the following day a papular eruption presented itself, and he was at once discharged to Haslar Hospital, where the disease ran a mild course. This man had also been vaccinated in childhood. In both these cases the clothes of the patients were sent to the hospital with them,

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for the purpose of disinfection, and the places to which they have been confined in the ship were carefully washed out with a solution of carbolic acid.

There was a single case of small-pox in the *Dauntless*, at Hull. It occurred in the person of a seaman who was doing duty in one of the tenders to the ship, and who presented himself on board with a very suspicious eruption covering his face, arms, and body. He was not permitted to go below, nor to mix with the ship's company, but was at once removed to sick quarters on shore, where the case proved to be of a very modified character. He had several good vaccination cicatrices.

In the month of April three cases of small-pox occurred in merchant ships on the books of the *Fisgard*. The first was in the person of a petty officer who had been on short leave in London, but who stated that he had not been exposed to the disease. He was well vaccinated. The second case occurred in one of the crew of the *Porcupine*, which vessel was manned by hired civilians from the Shetland Islands, who were engaged for surveying duties during the summer, and thereafter discharged to the shore. All her crew were known to have been exposed, shortly before, to the poison of measles, but not of small-pox. This man was completely unprotected, nevertheless the attack through which he passed was mild. The last case was in the person of one of the permanent crew of the *Fisgard*, an intelligent ship's corporal, who, when off duty, lived in the town of Woolwich, at his own house, being married. He escorted the second case, who leant upon his arm, to the Herbert Hospital. He was not only well vaccinated, but stated that he had suffered from small-pox, although no traces of the disease were discernible. With reference to the origin of these cases, the staff surgeon* of the *Fisgard* observes:—"The first two cases were unaccountable, and in the absence of any other positive or probable communication of the disease, the third case must have resulted from the second, and must have possessed a wonderful proclivity to the reception of the poison of this exanthem. On the assumption that he was thus infected, and in no other way, he presented the eruption within three days after exposure to the contagion, so that the period of incubation was almost *nil*. This, too, it must be remembered, if his statement be trustworthy (and there is no ground for doubting it), was not his first, but his second attack. The disease was authentic, but exceedingly modified."

There was a single case of small-pox in the *Implacable*, at Plymouth. It occurred in the person of a boy, who presented very good vaccination cicatrices, and in whom the attack was very mild. When on leave, he had visited a friend's house in which there was a child labouring under the disease.

In the *President*, at London, a mild case of small-pox occurred, in the person of a petty officer who resided in Poplar. No reference is made as to the probable origin of the disease, nor is it stated whether the man had been previously vaccinated or not.

Scarlet

* Staff Surgeon C. K. Ord, M.D.

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Scarlet Fever.—Twenty-four cases of this exanthem were under treatment during the year, of which one proved fatal. The only ship in which the disease appears to have made any progress was the Duke of Wellington, in which seven cases, including the fatal one, occurred. There were single cases in the Asia, Boscawen, Excellent, Ganges, Lion, Monarch, and Trafalgar; the Northumberland and the Pembroke, including the Sheerness Reserve, had each two cases; and there were three cases in the Royal George and in the St. Vincent.

The history of the outbreak in the Duke of Wellington is thus given by the surgeon* of the ship:—"During the period embraced in this journal seven cases of scarlatina occurred; the first three in boys. The first of these possibly received infection on shore, as ten days previous to his complaining he had obtained afternoon leave. Of the other two, one had not left the ship for a period of ten weeks, and the other had not been on leave for five weeks, so that in all probability they were infected on board.

"The 200 boys who were then in this ship occupied the middle deck, and were separated from the rest of the ship's company; but I deemed it advisable to have them at once removed to Her Majesty's Ship Victory, where they were widely berthed and carefully examined every day. All those affected with sore-throat were separated for observation, but no other case of fever presented itself, and at the expiration of a fortnight they would have returned to the ship had not another case of scarlatina occurred amongst the Marines. The subject of it was placed on the sick-list on the 15th of June with suspicious symptoms, and was separated for observation; the next morning the characteristic rash made its appearance, and he was removed to hospital. He had not been on shore for three weeks.

"The middle deck being unoccupied, I recommended that the Marine messes should be removed there from the lower deck, as there still seemed to be some source of infection in the ship. The crew were examined from time to time, but this proved to be an isolated case, and on the 30th of June the boys were allowed to return to the ship from Her Majesty's Ship Victory.

"For the last twelve months scarlatina has been prevalent in this neighbourhood, but no other case occurred until the 29th of October, when a petty officer, who, being a married man, slept on shore every night, was attacked. He was isolated for twenty-four hours for observation before being sent to hospital. The mess to which this man belonged was situated forward on the middle deck, and away from other messes. The petty officers forming the mess were examined, but the case proved to be a solitary one, and could have had no connection with the next case which presented itself on the 22nd of November in the person of a Marine. He reported himself on the evening of the 21st, and was isolated for observation. During the night a well-marked rash made its appearance on the body, and in the morning he was removed to hospital. This man came on board from

* Surgeon Fredk. Blake.

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from breaking his leave on the 29th of October, and had not visited the shore since, as he was undergoing punishment. From the 9th to the 16th of November he was imprisoned in a cell on the orlop deck, where he must have contracted the disease. I carefully investigated the history of the previous occupant of this cell, without being able to discover any clue to the source of the infection; but, on making further inquiry, I found that clothes and bedding belonging to deserters and invalids who had died on their passage home had been stowed in the cell, and I considered that the man had been infected from this source.

"As this Marine had frequented and slept in his mess till the night on which the rash appeared, I thought it prudent to advise the removal of the mess on board her Majesty's ship *Victory*, where they remained for twelve days. No other case occurred. The cell in which the Marine had been confined was fumigated with sulphur and washed with lime and carbolic acid."

Under the head of "Hygiene," the same officer observes, in connection with the subject:—"Another source of infection, which is in constant operation on board, is the custom of storing bedding and clothes belonging to deserters from other ships, as well as of invalids and men who have died on their passage home. These are not only stored, but sold and distributed about the ship. Deserters again, who are usually brought on board from the lowest haunts, are allowed to remain in clothes soiled, and possibly infected, as no provision is made to enable the commanding officer to issue fresh clothes. I believe that in future all bedding and clothes that are sent on board will be inspected, and if worth keeping will be immediately removed to Haslar Hospital to undergo the process of disinfection before being stored; and deserters will be provided with suits of clothes made and kept expressly for them."

The case which proved fatal occurred in the person of a boy who was under treatment in Haslar Hospital. From the commencement of desquamation he had suffered from albuminuria for a fortnight, but without any urgent symptoms, when he suddenly became convulsed and insensible, and died in twelve hours.

Relapsing Fever.—A single case of this form of fever appears in the returns from the *Fisgard*. It occurred in the person of a boy who had recently entered the service, and had been granted leave to visit his friends in London. While there he resided in a house where a female relative was ill with fever, but of what nature he could not say. Very shortly after, he was taken ill and removed to the London Fever Hospital, where he remained three weeks, and was discharged on his recovery from what was noted on his bed-ticket, and was, his physician told him, "relapsing fever."

The disease was very epidemic in London at the time. On the boy's return to the *Fisgard*, he still complained of giddiness, occasional shiverings, and of sleeplessness, and he was accordingly sent to the Herbert Hospital to hasten his recovery.

Typhus Fever.—Four cases of this malignant form of fever occurred in the force during the twelve months, one of which proved fatal. This case presented itself in the person of a petty officer of the

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the Cambridge, who was taken ill when on shore, and visited at his house. His symptoms being of an obscure character, he was permitted to return on board on the following morning. The surgeon* of the ship, who was himself confined to bed at the time, says:—"He was visited on the 8th of March in one of the foulest localities of Devonport. On the following morning he came on board, was placed in bed and kept under observation. It does not appear that the assistant surgeons had any suspicion at this time of the true character of the disease; the symptoms were so ambiguous; the amount of pyrexia, &c. being but little obvious, and his chief complaint being of an excruciating pain in the course of the sciatic nerve of the left leg. On the evening of the 11th it was reported to me that he muttered a good deal when apparently asleep. I contrived to visit him late in the evening, and found him approaching a typhoid condition. His tongue was foul and dry, the pulse small and much accelerated, sordes forming on the teeth, intellect blunted, &c.; he had passed his evacuations naturally. He was carefully fed during the night with beef-tea, arrow-root, wine, &c., and in the morning was conveyed in a cot to the hospital. He died two days after his admission. This case was an example of the low insidious form of blood-poisoning occasionally to be met with in all these three towns, and perhaps the worst form of fever to be found in this country."

On admission to Plymouth Hospital he was speechless, breathing stertorously, and could only be roused with difficulty. The pupils were contracted, the face flushed, the tongue dry and brown, and the lips and teeth covered with sordes. The pulse could not be counted, and there were several dark livid patches on various parts of the body. He continued gradually to get worse, the stertor increased, the pupils were contracted to a pin's point, there was perfect insensibility, and he died comatose at 6 a.m. of the 13th of March. On post-mortem examination of the body, the superficial veins of the brain were found congested, the arachnoid thickened, and there was some sub-arachnoid effusion. The substance of the brain was healthy, and the ventricles empty. The heart was large, both sides filled with fluid blood, and clots of decolorised fibrine. The lungs were much congested and filled with a frothy fluid; the liver and spleen were large, and the latter very friable and congested. The bladder was thickened, and nearly full of clear urine.

Single cases of typhus appear in the returns from the Eagle, Minotaur, and St. Vincent. The case in the Eagle was accompanied with the characteristic eruption of the disease. The patient was treated in sick quarters and recovered. The cases in the Minotaur and St. Vincent were of a somewhat doubtful character. The subject of the disease in the Minotaur was a seaman; he presented himself at Milford on the 12th of October, complaining of inflammation of the ear. He had only joined the ship a few days previously, and said that he was very wet and uncomfortable in the gunboat which brought him round. He had had a discharge from the right ear, he said, for five years. On the 14th he had a shivering fit and was observed

* Surgeon Michael Walling, M.D.

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observed to be silent and dejected. On the 15th he complained of severe headache, and the discharge from the ear stopped; he was retching during the day. On the 18th the pulse was 122, the skin hot, and the discharge from the ear had reappeared; but frontal headache still persisted. On the night of that day he was delirious. On the 20th there was less delirium. On the 21st and 22nd delirium was more constant, and there was much restlessness. In the afternoon of the latter day the delirium ceased on the application of a blister to the vertex. Expectoration, however, was pneumonic, being rusty and tenacious. On the 25th he was landed at Lisbon Hospital, where he died on the 27th.

The following report of the post-mortem examination of the body is given by the staff surgeon* of the ship:—"Body rigid and emaciated; arachnoid membrane thickened, and the surface of the brain congested; medullary portion of a dull white colour; very little fluid in the ventricles. *Chest*.—Heart displaced to the left side; pericardium filled with serum; three pints of sero-sanguineous fluid in the chest; left pleura costalis adherent; left lung soft, rotten, and infiltrated with pus; the right lung also disorganised, the upper lobe being hepatized, and the middle lobe infiltrated with pus. The liver, spleen, pancreas, and kidneys were soft."

The staff surgeon adds:—"The patient was unfavourably situated during his illness: confined to a dark sick-berth, and the ship being at sea, it was not possible to open the scuttles to procure efficient ventilation; the noises also prevented auscultation. Notwithstanding that he rallied on the tenth day of the fever, the pleuro-pneumonia advanced insidiously, and so exhausted him that unfavourable symptoms soon supervened."

From the history of this somewhat obscure case, it appears rather to have been one of meningitis occasioned by disease of the bones connected with the ear, and resulting in pyæmia. It is to be regretted that the condition of the petrous portion of the temporal bone and of the mastoid cells was not examined. On Table IV. the death is recorded under Diseases of the Brain.

With reference to the case of typhus which appears in connection with the St. Vincent, the staff surgeon observes:—"Under this head is tabulated a case, which more properly was one of typho-pneumonia, affecting a boy, and to which he unhappily succumbed at Haslar, on the 28th of November. He had been sent thither on the 19th of the same month. Having been the subject of scabies, he had recently undergone the process of sulphur inunction, from which he was freed on the 16th of November. Two days afterwards he was placed on the sick-list with febrile pneumonia, and diarrhœic symptoms. He had just been entered into the service, and had in all probability contracted the malady on shore, where I understand he had been wandering about for three months in search of a mother who had deserted him and two other children, and he had been sleeping in various unions, and doubtless by the wayside."

Simple

* Staff Surgeon Hart Gimlett, M.D.

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—
Class I.
Sect. A.

Simple Continued Fever.—There were 240 cases of this form of fever under treatment during the year, of which two were invalided and two had a fatal termination. Although the majority of the cases were of a comparatively trifling character, some were sufficiently prolonged and severe, as may be evidenced by the fact that each case was on an average thirteen days under treatment. The only vessels in which they occurred in any great numbers were the *Bellerophon*, the *St. Vincent*, and the *Warrior*.

There were thirty-eight cases of this fever in the *Bellerophon*; and, with reference to them the surgeon* observes:—"Thirty-two of them were discharged to duty cured, and six sent to hospital for treatment. The first case sent to Lisbon Hospital had rather urgent symptoms, and I thought it was better at once to remove him to the shore. He was a thin delicate-looking boy, and had suffered for a long time from ague. The second case was under treatment on board this ship from the 14th of April till the 10th of May. I thought he was not sufficiently ill to be left at Lisbon Hospital, as the ship was going to England, but he did not recover on the passage home; a persistent dry brown tongue in the morning, with hot skin and pyrexial symptoms, remained. It had not much effect upon his appearance, nor did he lose much flesh. I supported him with wine and beef tea, and on arriving at Spithead sent him to Haslar Hospital. A third case also was kept on board for ten days, and discharged to Haslar as soon as an opportunity offered. The symptoms were rather severe, and at first complicated with a little rheumatism of the left knee, which however disappeared in a few days, but the low continued fever remained, with flabby tongue, quick pulse, giddiness, weakness, and listlessness. . . . The cases that were treated on board varied in duration and severity, but they were all simple continued fever of a mild type. Some got well after two or three days' treatment, whereas others took a longer time to run their course. The young and the old took longest. Those between twenty-five and thirty-five years of age only averaged four days; the young averaged ten days, and the old nineteen; growing youth and declining strength being, of course, most inimical to reparation."

In the *St. Vincent*, in which there were twenty cases of this form of fever, ten were treated on board, and the remainder sent to hospital. Those treated on board are said to have been of a mild ephemeral character, such as are common in the hotter months of the year. The cases sent to hospital were of longer duration, and of a graver nature.

There were forty-three cases of simple continued fever in the *Warrior*; but little information, however, is given in connection with them. The average duration of each case was between six and seven days.

Cholera.—Three cases of cholera appear in the returns from the force; one in the *Excellent*, one in the *St. Vincent*, and one in the *Warrior*. The case in the *Warrior* proved fatal. In this instance,
in

* Surgeon Nicholas Littleton.

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Class I.
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in which the case is classed in the returns from Haslar Hospital, whither he had been discharged, as one of sporadic cholera, the man was suddenly seized, while on leave, with severe vomiting and purging, accompanied by great prostration, which, on admission on the third day, had increased to complete collapse, with suppression of urine, extreme irritability of the stomach, and frequent very loose motions, pale, but not rice-water. He rallied for a few days, but sank exhausted on the twelfth day. Post-mortem examination of the body showed inflammatory congestion of the small intestines, without ulceration.

In the Excellent the case of cholera is thus recorded by the staff surgeon : *—"A remarkable and isolated case of this disease occurred on the evening of the 18th of January. A coastguard man, æt. 29, who had lately joined, was seized with purging at 3.30 p.m., but he did not apply for medical aid until 7 p.m. At that time there was vomiting, accompanied by copious rice-water stools, and cramps, both in the abdomen and lower extremities; the tongue was cold, the arms and legs remarkably so; the voice was weak; the countenance sunken; the pulse, a thread. All medicine was at first rejected. Subsequently a large dose of calomel was given, followed by some brandy and laudanum, heat and friction being assiduously employed. There was no vomiting after the calomel. Reaction set in about midnight, and the purging gradually ceased. Next morning he suffered principally from weakness. He passed no urine from the commencement of the attack until he left the ship next day for hospital. The secretion had been completely suppressed, for, on introducing a catheter, the bladder was found to be empty.

"No cause could be assigned for the attack, which closely resembled the Asiatic form of the disease. The man was so weakened that he was obliged to give up his drilling for some months."

In the return from the St. Vincent the attack is classed as "cholera æstiva," and is said to have been of a simple transitory character, sharp while it lasted, and for which no cause could be assigned. The man was only on the sick-list two days.

Influenza.—A slight epidemic of this disease in a mild form appeared in the St. Vincent between the 1st and 14th of November. It affected the boys chiefly, and was considered to be attributable to the very cold, humid, and generally inclement state of the weather, and to the sudden alternations of temperature to which the ship's company was subjected during that time. Although the affection prevailed very generally amongst the boys, it was only deemed necessary to place twenty-six of them on the sick-list, all of whom were soon enabled to return to duty.

II. General Diseases.—Section B., or Constitutional Group.

Class II.
Sect. B.

Rheumatism.—There were 1,062 cases of rheumatism under treatment during the year, which is in the ratio of 48 per 1,000 of force, being:

* Staff Surgeon Joseph Henderson, M.D.

being a reduction, compared with the preceding year, equal to 3· per 1,000. Of these, twenty-six were invalided, giving a ratio of just one-half of that of 1868. The total number of days' sickness occasioned by the disease was 20,011, which gives an average of nearly nineteen days to each case. During the year nearly fifty-five men were daily inefficient from this cause.

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Syphilis.—Nine hundred and thirty-two cases of primary syphilis and 284 cases of secondary syphilis were under treatment during the year; the former being in the ratio of 42·1 per 1,000, and the latter of 12·8. Compared with the preceding year there was an increase in the ratio of primary syphilis to the extent of 5· per 1,000, and a reduction in the ratio of secondary syphilis to the extent of 3·1 per 1,000. The average duration of each case of primary syphilis was about thirty-seven days, and each case of secondary syphilis about forty-one days. Of the total number of cases, five of primary disease and sixteen of secondary disease were invalided, and one of secondary disease proved fatal.

There were forty-one cases of primary syphilis and thirteen of secondary syphilis in the Asia. With reference to the first six months of the year, during which twenty-six cases of primary and eleven of secondary disease occurred, but little information is given by the medical officer then in charge*; but, during the latter half of the year, his successor† observes:—"Seventeen attacks of syphilis have occurred, fifteen of primary and two of secondary. Seven of the former and both of the latter were sent to hospital.

"This disease has increased in the last six months among the crew, more particularly the Marines. I can only account for it by stating that most of the men have been affected at Southampton, a town to which the Contagious Diseases Act does not extend."

In the Duke of Wellington there were seventy-three cases of primary and thirty-six of secondary syphilis. From the 1st of January to the 6th of March, there were nine cases of primary and eight of secondary disease, with reference to which the staff surgeon‡ observes:—"That two of the former were stated to have contracted the disease, one at Aldershot, and one at Southampton. Two only were hospital cases, the majority being trivial superficial sores, yielding to a few days' cleanliness and local applications." During the remainder of the year, when another medical officer was in charge, venereal diseases appeared to increase steadily, a large number of the cases, however, being contracted beyond the neighbourhood of the port. The surgeon observes:—"The increase of disease during the last quarter appeared to depend on some local cause, the reason of which I endeavoured to ascertain by inquiries and investigation. As regards the arrangements and duties of the police, I believe them to be as efficient as the nature of the Contagious Act will permit.

"A visit I paid to the Lock wards of Landport Hospital, over which

* Staff Surgeon Charles Forbes, M.D. † Staff Surgeon Fredk. M. Kayner.

‡ Staff Surgeon Wm. T. Wilson.

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which I was conducted by the house surgeon of that institution, impressed me that the arrangements were defective, both as regards the treatment and examination of the patients. The rule of assigning two Lock wards to each of the medical officers of the hospital did not appear to conduce to the efficiency or discipline of the establishment."

In the Excellent, in which there were fifty-five cases of primary disease and sixteen of secondary, the staff surgeon remarks that there was a great increase in the diseases during the latter six months of the year. He says, "As regards primary sores, 1869 is a complete inversion of 1868 The returns from this ship are calculated, in my opinion, to give a tolerably accurate indication of the condition of this port with reference to the prevalence of venereal disease.

"It is quite clear that, notwithstanding the vigilant administration of the Contagious Diseases Act, much syphilis and gonorrhœa escapes detection, and prostitutes continue to ply their calling and to propagate disease, who ought to be under treatment in hospital. In the present restricted operation of the law, such a state of things is perhaps unavoidable. But in the meantime much good might be effected by more frequent examinations. There are at this place about 600 prostitutes known to the police as such. A compulsory weekly examination of each would be very desirable. At present inspection is often eluded, and there is no doubt that women affected with gonorrhœa occasionally use astringent injections so effectually as to enable them to pass an inspection without being detected; and this perhaps partially accounts for the circumstance that when primary sores appeared to be much on the decrease gonorrhœa held its ground or exhibited an increase."

There were thirty-seven cases of primary syphilis and twenty-one of secondary syphilis in the Hercules. In a considerable number of these cases the disease was contracted at ports to which the Contagious Diseases Act does not extend, such as Lisbon, London, Portland, Milford, and Gravesend.

There were fifty-two cases of primary syphilis and ten of secondary syphilis in the Northumberland; but very few observations are made in connection with them. Speaking of Gibraltar, the surgeon* observes:—"This is not by any means a good place to give men leave, for the wretched women are numerous, and disease amongst them is at times very severe. The men have few amusements, drink is very plentiful, and the high license duties charged for the sale of drink induce the sellers to concoct and sell the vilest stuff." He also implies that the Contagious Diseases Act is very imperfectly carried out on that island, a fact which has frequently been commented on by medical officers.

In the Pembroke and Sheerness Reserve, there were eighty-three cases of primary syphilis and sixteen of secondary syphilis. With regard to the effect of leave upon ships' companies, the surgeon† of the

* Surgeon S. Clift.

† Surgeon T. Haran.

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the Pembroke makes the following observations:—"One of the most prized privileges connected with Home Service consists in the liberal amount of general and special leave usually granted. To such of the men as are married this is a great boon, but to those who are not it frequently becomes quite the reverse. Sailors and soldiers, the former especially on account of their peculiar training, are proverbially an impressionable race, and very few of them possess sufficient strength of mind to resist the incentives to drunkenness and debauchery so conspicuously and unblushingly displayed in all sea-port and garrison towns, with the ill-concealed object of ensnaring them. These are evils which cannot be wholly remedied, except by withholding the privilege of leave altogether, and this is a course, unjustifiable at any time, which no one would think of adopting nowadays. Drunkenness, the besetting sin of soldiers and sailors, although very much on the decline, will, it is to be feared, always exist more or less, but the diseases resulting from debauchery, meaning by the term impure connection with prostitutes, are happily becoming numerically fewer year by year, in towns protected by the provisions of the Contagious Diseases Act. The statistics of the last few years clearly prove this assertion.

"The men of this ship have had abundance of leave, general and privileged, during the period of this Journal, including fourteen days after they were paid off from the Agincourt. While on long leave many of them visited remote parts of the kingdom, and were exposed to the ordinary sources of contagion prevailing in most places. On such occasions they were always examined on their return, and although a great many admitted they had "gone with women" in unprotected towns and villages, I am bound to say that most of them escaped, and that of the number of cases of venereal—syphilis and gonorrhœa—under treatment for the entire period, the proportion of those contracted in protected towns to those not so favoured stands in the ratio of 15 to 14, an anomaly which would appear singular were it not generally known that prostitutes arriving from unprotected places very often succeed in communicating the disease, in quick succession to several persons before they are detected. It must also be borne in mind that men, whether they be sailors, soldiers, or civilians, who may have contracted the disease in London or other inland towns, communicate it very frequently to the wretched creatures gaining a precarious livelihood by prostitution in protected places, and who may have previously been supplied with a clean bill of health. They in turn infect others, and so the disease is kept alive in full vigour, but on a greatly reduced scale to what it used to be. The only remedy for this state of things will be the application of the provisions of the Act to every town in the United Kingdom, and if those who are now so loud in their outcries and protestations against one of the most salutary Acts of Parliament ever passed were only to realise the incalculable benefit its universal application would confer on generations yet unborn, and could only estimate the lives of suffering and misery the victims of inherited syphilis are doomed to lead, to say nothing of the shame and the torture the silly victims of their own indiscretion so often endure, I have no doubt whatever that, intensely prejudiced and sternly moral as they may be, and no doubt are at present,—pity for

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for the sufferings of victims "*in posse*," if not for those of the afflicted "*in esse*," would overbear all scruples, and that instead of being opponents they would become ardent supporters of the Act."

The staff surgeon* of the Sheerness Reserve, remarks, that, as a rule, the disease, as contracted in Sheerness, was of a more tractable character than formerly, being more amenable to treatment.

There were forty-four cases of primary syphilis, and nine of secondary syphilis, in the Warrior. Very few comments are made upon them, but the staff surgeon† observes that, "In Portsmouth the Act seems to have done good, but the outlying towns, where it is not in force, produce a larger quota, so that to stamp out the disease a general law is required, which the feeling of the public at present prevents."

Phthisis Pulmonalis.—One hundred and twenty-two cases of this disease were under treatment, of which eighty-nine were invalided, and twenty-two terminated fatally. All the ratios under this head were lower than those of the preceding year.

Epithelioma.—A fatal case of this disease occurred in the person of an old pensioner borne on the books of the Asia. He was originally placed on the sick-list for abscess connected with the lower jaw. Ulceration of the soft parts covering the jaw of a cancerous nature set in and extended, and carried him off, exhausted, after having been more than two years under treatment.

III. Diseases of the Nervous System and Organs of the Special Senses.

Class III.

Under this head 547 cases of various forms of disease were placed on the sick-list during the year, of which seventy-seven were invalided and thirteen proved fatal. No comparison can be drawn between the various ratios during the present year as compared with former years, the new nomenclature of diseases having added to this class a number of affections which formerly were differently placed.

Apoplexy proved fatal in two cases. The subject of one of the attacks was a warrant officer of the Sheerness reserve, who appears to have laboured under a complication of diseases, having previously suffered from chronic disease of the liver, hæmoptysis, gangrenous ulceration of the tongue, and diarrhœa. The apoplectic seizure which carried him off was his second attack. The other fatal case occurred in the person of a commissioned officer of the Royal Adelaide, who had been complaining for a few days of loss of appetite, pains in the head, drowsiness, and general debility. He was suddenly seized with giddiness when in the act of leaving the wardroom, and was at once conveyed to his cabin, where death took place in a few minutes.

There were ten deaths from various forms of disease of the brain and its membranes.

A private of the Royal Marine Artillery in the Hercules, a well-proportioned man, apparently in robust health, was placed on the sick-

* Staff Surgeon James Lilburne, M.D. † Staff Surgeon J. C. Walsh.

sick-list on the 7th of August, complaining of intense pain in the right ear; great irritability of the stomach set in, accompanied with intense and persistent headache. On the 11th he had a severe rigor, followed by profuse perspiration, and on the 12th there was a free purulent discharge from the ear. The symptoms subsequently became somewhat alleviated, but a dull headache continued; he was very depressed, and on the 14th the pupils were dilated; the pulse very slow, and he was passing his stools and urine involuntarily. In this condition he was discharged to Plymouth Hospital, where he died on the following day. On post-mortem examination of the body, the dura mater of the right side was observed to be of a dirty green colour, and on slitting it up, about four ounces of fetid pus escaped from between it and the arachnoid. The surface of the right hemisphere of the brain was coated with pus. There was ulceration of the size of a florin on the under surface of the right posterior lobe. This had pierced the pia mater. Over the petrous portion of the temporal bone, which was found to be in a state of caries, the dura mater was ulcerated.

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A boy of the Royal George was sent into Plymouth Hospital for the treatment of diarrhœa. On admission he was found to be in a state of extreme debility with repeated rigors; he had a flushed and anxious face, and was soporose, but readily roused to answer questions. The pulse was feeble and frequent, and the tongue creamy. There was much purulent discharge from the left ear, with tenderness over the temporal and mastoid regions. He stated that he had been subject to a discharge from his ear since childhood. The symptoms gradually became worse, assuming those of pyæmic poisoning. He died on the 7th of May. On post-mortem examination of the body, the petrous portion of the left temporal bone was found to be extensively diseased, with pus effused on its surface, communicating with the jugular foramen. Purulent matter was also effused on the under surface of the crura cerebri and posterior lobe, and in the latter an ulcerated spot was found. The bony case of the auditory canal was extensively carious.

The majority of the other fatal cases of disease of the brain had their origin in caries of the petrous portion of the temporal bone.

IV. Diseases of the Circulatory System.

There was a reduction in the ratio of deaths coming under this head, compared with the preceding year, but the ratio of cases and invaliding were higher. Of 217 cases of all forms of disease entered on the sick-list, ninety-nine were invalided, and twenty terminated fatally. There were twelve deaths from organic disease of the heart, and eight from aneurism.

Class IV.

V. & VI. Diseases of the Absorbent System and Ductless Glands.

Under this head appear 131 cases of sympathetic bubo, and three of adenitis. The latter were re-entries of one man, a seaman of the Asia, strongly and heavily built, but of a highly strumous diathesis. He suffered from chronic enlargement of the cervical and sub-maxillary

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maxillary glands, for which he had been at various times under treatment. The glands behind and below the left ear were nearly the size of an orange, with great thickening and hardening of the surrounding tissue. He was 246 days under treatment on board ship and in hospital.

Each case of sympathetic bubo was, on an average, between thirty-three and thirty-four days under treatment.

VII. Diseases of the Respiratory System.

Class VII. The removal of influenza to the Class of General Diseases, Section A., and of phthisis pulmonalis to Section B. of the same class, very much alters the character of this section of diseases, as compared with the preceding year. Of those of which the classification is unchanged, however, there is very little difference in the different ratios, compared with those of 1868. Of 327 cases of various forms of inflammatory disease, nineteen were invalided and twenty-four proved fatal.

VIII. Diseases of the Digestive System.

Class VIII. Under this head, 2,533 cases were placed on the sick-list; of which, sixty-five were invalided and seven terminated fatally.

A fatal case of peritonitis occurred in the person of a boy of the Ganges, who was admitted into Plymouth Hospital on the night of the 11th of June. In the report that was brought with him, it was stated that he had been ill for five days with pyrexia, constipated bowels, and vomiting (apparently fæcal matter). On his admission, he complained of pain all over the abdomen, not much increased on pressure except over the colon and cæcum. The abdomen was hard, and he stated that his bowels were loose. The skin was hot and dry; the tongue coated and dry, and the pulse 130 per minute. The expression of the face was very sunken. During the night he had three or four liquid brown stools, and vomited some dark matter, but without any fæcal odour. He complained of no pain, but died quietly at 7 a.m. of the 12th, ten hours after admission. On post-mortem examination of the body, a considerable quantity of fluid was found in the abdominal cavity. The parietal layer of the peritoneum was extensively covered with recent lymph. The omentum, transverse colon, and small intestines were glued together by the same effusion. The peritoneal coat of all the intestines, and especially of the cæcum, was deeply congested. In the cæcum there was a hard mass of undigested food containing some large raisin stones, but there was no inflammation of the mucous membrane.

In Table IV., under the head of dyspepsia, a fatal case appears in connection with the Duke of Wellington. It occurred in the person of a petty officer, who was placed on the sick-list on the 29th of April, complaining chiefly of dyspepsia and vomiting. He had suffered some months from dyspnœa, and presented a most cachectic appearance, having a scaly eruption on both feet and legs, and there being an occasional discharge from an old abscess in the right thigh, for which he was invalided from the Pacific in 1865. Although entered on the sick-list under the head of dyspepsia and debility, the

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disease which carried him off was double pneumonia, which, it would appear, had been insidiously gaining upon him without affecting him to such a degree as to interfere with his duties as sick-berth steward. On examining his chest, the whole of the right side and the upper part of the left were found dull on percussion, with tubular respiration. He was discharged to Haslar Hospital for treatment on the 1st of May, being then, according to the hospital report, in a moribund state. He died on the 5th of the same month.

A fatal case of dysentery occurred in the person of an officer who had contracted the disease originally in China, and the same may be said of a fatal case of diarrhoea occurring in a seaman of the *Fisgard*.

A fatal case of abscess of the liver occurred in Plymouth Hospital in the person of an officer of the *Royal Adelaide*, who had suffered some years previously from inflammation of that organ. On admission, on the 31st of May, he was in an extremely low, prostrate condition. The tongue was found brown and dry; the lips and teeth covered with sordes; pulse 100, and very weak; the skin and conjunctivæ were icteroid; the bowels costive; the urine dark brown in colour, but not scanty. It was found to be free from albumen, but loaded with bile. He was slightly delirious on the evening of his admission. On the nights of the 2nd and 3rd of June he had rigors, followed by heat, and on the morning of the 4th he was violently delirious. Another shivering fit occurred on the 6th, after which the pulse rose to 116, and he was very restless. From that time the case took a rapidly downward course; most distressing hiccough set in. He was constantly delirious and moaning. The urine became very scanty and almost black, and he died on the morning of the 14th.

On post-mortem examination of the body, the liver was found rather small, the external surface of the whole organ mottled, and "hob-nailed." The gall bladder was distended with bile. The whole hepatic tissue was found studded with abscesses of various sizes, but all small, and apparently connected with the portal vessels, which were full of pus. Some of these abscesses showed through the surface of the liver. The left lobe was much shrunken and hard, and presented the appearance of cirrhosis; weight 4 lbs 7½ ozs. There were some old adhesions between the pancreas and the transverse colon, and the kidneys were firmly adherent to the surrounding parts; but they, as well as all the other abdominal and thoracic viscera were healthy in structure.

A warrant officer of the *Indus* who had been for several months suffering from chronic disease of the liver and diarrhoea died in Plymouth Hospital. On post-mortem examination of the body, the lungs were found to be studded with tubercle, the omentum was adherent all over the intestines. The mesenteric glands were much enlarged, and some of them were of a cheesy consistence. The small intestines were so matted together and disorganised, that they gave way in several places during removal. There were more than twenty distinct patches of ulceration on various parts of the mucous membrane, some as large as three or four inches square.

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IX. & X. Diseases of the Urinary and Generative Systems.

Deducting from this group primary and secondary syphilis, which have been transferred to General Diseases, Section B., the ratios of cases and invaliding under this head are somewhat larger than in the previous year, but the death-rate in both years was alike. In the ratio of cases of gonorrhœa, there was an increase to the extent of 7·3 per 1,000.

Of 1,312 cases of all forms of disease, forty-two were invalided, and six proved fatal. In the majority of fatal cases death resulted from Bright's disease of the kidneys.

XI. Diseases of the Organs of Locomotion.

Class XI.

There were ninety-seven cases of various forms of disease of the bones and joints, of which nineteen were in invalided.

XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.

Classes XII.
& XIII.

Of 4,517 cases of various forms of disease coming under this head, forty-five were invalided, and two proved fatal. The ratios are almost precisely the same as in the previous year.

In the two fatal cases death resulted in one instance from carbuncle, and in the other from the exhaustion caused by the formation and discharge of several large scrofulous abscesses on different parts of the body.

Unclassed Diseases.

There were 123 cases of debility, forty-two cases of delirium tremens, and twelve cases of poisoning under treatment, of which eighteen cases of debility, two of delirium tremens, and one of poisoning were invalided.

Delirium Tremens.—Of the forty-two cases of this degrading form of disease, six occurred in commissioned officers, one in a warrant officer, three in petty officers, one in a leading seaman, three in able seamen, seven in stokers, five in bandsmen, twelve in marines, and in four instances the ratings have not been ascertained.

Poisoning.—Under this head twelve cases appear, of which five were examples of lead poisoning, six were alcoholic, and one was a case of mussel-poisoning. They all recovered, but in one instance lead palsy existed to such an extent that it was necessary to invalid the subject of the attack.

Wounds and Injuries.

Eleven men sustained fatal fracture of the skull, seven by falling from aloft; one while on leave; one by falling from the upper to the main deck; and in two instances it is not stated how the accident occurred. A man sustained fatal fracture of the spine by a box of coals falling upon him; and another man sustained a similar injury by

by falling from a window. A man sustained dislocation of the neck by falling from aloft; a man sustained fracture of the ribs and fatal internal injuries by falling from aloft; and two men were killed by the bursting of the boiler of a steam vessel.

Twenty-two persons were drowned during the year. Of these six fell overboard; nine were capsized in boats; one fell into the harbour from a railway embankment; one fell into a dock; one fell into a canal; one was drowned while with a swimming party; and one man, while labouring under delirium tremens, eluded his guard, jumped overboard, and was drowned.

A man committed suicide by swallowing oxalic acid.

The total number of deaths was 153, which is in the ratio of 6·9 per 1,000, being a decrease, compared with the preceding year, equal to ·6 per 1,000. The death-rate from disease only was 5·1 per 1,000. In 1868 it was 5·5

Invalided.

Under General Diseases, Section A., three persons were invalided, viz., two for the sequelæ of fever; and one for erysipelas. Under Section B., 145 were invalided, of which twenty-six were for rheumatism; one for gout; five for primary, and sixteen for secondary syphilis; six for scrofula; eighty-nine for pulmonary consumption; one for purpura; and one for dropsy. Seventy-seven persons were invalided for diseases of the nervous system, and organs of the special senses; ninety-nine for diseases of the circulatory system; two for diseases of the absorbent system and ductless glands; twenty-three for diseases of the respiratory system; sixty-five for diseases of the digestive system; of which thirty-nine were for hernia; forty-two for diseases of the urinary and generative systems; nineteen for diseases of the organs of locomotion; forty-five for diseases of the cellular tissue and cutaneous system; twenty-one for unclassified diseases; and twenty-five for wounds and injuries of various kinds.

The total number invalided was 566, which is in the ratio of 25·6 per 1,000, being an increase compared with the preceding year equal to 3·7 per 1,000.

TABLE, NO. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Small-pox - - - -	8	·3	—	—	—	—
Vaccinia - - - -	2	—	—	—	—	—
Measles - - - -	284	12·8	—	—	—	—
Scarlet Fever - - -	24	1·	—	—	1	—
Typhus Fever - - -	4	·1	—	—	1	—
Enteric Fever - - -	11	·4	—	—	5	·2
Relapsing Fever - -	1	—	—	—	—	—
Simple continued Fever -	240	10·8	2	—	2	—
Ague - - - -	111	5·	—	—	—	—
Remittent Fever - - -	9	·4	—	—	—	—
Cholera - - - -	3	·1	—	—	1	—
Diphtheria - - - -	—	—	—	—	1	—
Hooping Cough - - -	3	·1	—	—	—	—
Mumps - - - -	10	·4	—	—	—	—
Influenza - - - -	30	1·3	—	—	—	—
Erysipelas - - - -	44	1·9	1	—	2	—
II. General Diseases, Section B.:						
Rheumatism - - - -	1,062	48·	26	1·1	—	—
Gout - - - -	52	2·3	1	—	—	—
Syphilis { Primary - - -	932	42·1	5	·2	—	—
{ Secondary - - -	284	12·8	16	·7	1	—
Tumour Cystic - - - -	1	—	—	—	—	—
Scrofula - - - -	11	·4	6	·2	—	—
Phthisis Pulmonalis - -	122	5·5	89	4·	22	·9
Epithelioma - - - -	2	—	—	—	1	—
Purpura and Anæmia - -	3	·1	1	—	1	—
Dropsy - - - -	9	·4	1	—	2	—
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - -	4	·1	—	—	2	—
Sunstroke - - - -	3	·1	—	—	—	—
Paralysis - - - -	20	·9	15	·6	1	—
Vertigo - - - -	18	·8	—	—	—	—
Epilepsy - - - -	46	2·	19	·8	—	—
Neuralgia - - - -	80	3·6	—	—	—	—
Insanity - - - -	24	1·	13	·5	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
III. Diseases of the Nervous System, &c.—<i>continued.</i>						
Other Diseases of the Brain, &c.	10	·4	1	—	10	·4
Diseases of the Nervous System	4	·1	—	—	—	—
Diseases of the Eye - - -	258	11·6	16	·7	—	—
Diseases of the Ear - - -	68	3·	12	·5	—	—
Diseases of the Nose - - -	13	·5	1	—	—	—
IV. Diseases of the Circulatory System:						
Disease of the (Functional - -	135	6·1	31	1·4	—	—
Heart - { Organic - -	49	2·2	52	2·3	12	·5
Aneurism - - - - -	6	·2	2	—	8	·3
Varicose Veins - - - -	27	1·2	14	·6	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - - -	131	5·9	1	—	—	—
Glandular Diseases - - -	8	·3	1	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	5	·2	—	—	—	—
Catarrh - - - - -	2,507	113·4	2	—	—	—
Hæmoptysis - - - - -	31	1·4	2	—	1	—
Asthma - - - - -	7	·3	—	—	—	—
Other Diseases of the Lungs -	327	14·7	19	·8	24	1·
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	865	39·1	1	—	—	—
Diseases of the Mouth, Teeth, &c. - - - - -	20	·9	2	—	—	—
Dyspepsia - - - - -	545	24·6	5	·2	1	—
Dysentery - - - - -	12	·5	2	—	1	—
Diarrhoea - - - - -	620	28·	1	—	1	—
Colic and Constipation - -	164	7·4	—	—	—	—
Hæmorrhoids - - - - -	52	2·3	—	—	—	—
Hernia - - - - -	74	3·3	39	1·7	—	—
Worms - - - - -	37	1·6	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	43	1·0	11	·4	1	—
Diseases of the Liver, Spleen, &c. - - - - -	101	4·5	4	·1	3	·1

TABLE, No. I.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems :						
Diseases of the Kidneys - -	42	1·9	13	·5	5	·2
Diseases of the Bladder - -	16	·7	4	·1	—	—
Gonorrhœa - - - -	856	38·7	—	—	—	—
Diseases of the Organs of Generation - - - -	13	·5	8	·3	—	—
Stricture - - - -	71	3·2	7	·3	1	—
Varicocele - - - -	12	·5	8	·3	—	—
Orchitis - - - -	302	13·6	2	—	—	—
XI. Diseases of the Organs of Locomotion :						
Diseases of the Bones and Joints, &c. - - - -	97	4·3	19	·8	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :						
Phlegmon and Abscess - -	2,782	125·8	2	—	1	—
Ulcer - - - -	1,193	53·9	40	1·8	—	—
Erythema - - - -	38	1·7	—	—	—	—
Diseases of the Skin - -	283	12·8	3	·1	—	—
Carbuncle - - - -	—	—	—	—	1	—
Scabies - - - -	221	10·	—	—	—	—
Unclassed :						
Debility - - - -	123	5·5	18	·8	—	—
Delirium Tremens - - -	42	1·9	2	—	—	—
Poisoning - - - -	12	·5	1	—	—	—
Wounds and Injuries :						
Wounds, Injuries, &c. - -	4,022	181·9	25	1·1	17	·7
Burns and Scalds - - -	165	7·4	—	—	—	—
Submersion and Drowning -	25	1·1	—	—	22	·9
Hanging - - - -	1	—	—	—	—	—
Suicide - - - -	1	—	—	—	1	—
TOTAL - - -	19,892	900·	566	25·6	153	6·9

TABLE, No. 2.

SHOWING the Number of Days' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-pox - - - -	394	180	574	1.5	—
Vaccinia - - - -	21	-	21	—	—
Measles - - - -	164	6,587	6,751	18.4	.8
Scarlet Fever - - -	107	17	124	.3	—
Typhus Fever - - -	19	2	21	—	—
Enteric Fever - - -	88	516	604	1.6	—
Relapsing Fever - -	4	-	4	—	—
Simple continued Fever	1,184	1,939	3,123	8.5	.3
Ague - - - -	856	311	1,167	3.1	.1
Remittent Fever - -	133	101	234	.6	—
Cholera - - - -	5	-	5	—	—
Diphtheria - - - -	-	2	2	—	—
Hooping Cough - - -	21	130	151	.4	—
Mumps - - - -	124	81	205	.5	—
Influenza - - - -	151	28	179	.4	—
Erysipelas - - - -	365	872	1,237	3.3	.1
II. General Diseases, Section B.:					
Rheumatism - - - -	9,727	10,284	20,011	54.8	2.4
Gout - - - -	506	91	597	1.6	—
Syphilis { Primary - - -	14,780	19,617	34,397	94.2	4.2
{ Secondary - - -	3,245	8,418	11,663	31.9	1.4
Tumour, Cystic - - -	13	-	13	—	—
Scrofula - - - -	235	775	1,010	2.7	.1
Phthisis Pulmonalis -	1,152	8,647	9,799	26.8	1.2
Epithelioma - - - -	79	46	125	.3	—
Purpura and Anæmia -	61	43	104	.2	—
Dropsy - - - -	103	550	653	1.7	—
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - -	4	23	27	—	—
Sunstroke - - - -	39	102	141	.3	—
Paralysis - - - -	113	1,093	1,206	3.3	.1
Vertigo - - - -	72	327	399	1.	—
Epilepsy - - - -	504	440	944	2.5	.1
Neuralgia - - - -	545	423	968	2.6	.1
Insanity - - - -	139	956	1,095	.	.1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
III. Diseases of the Nervous System, &c.—continued.					
Other Diseases of the Brain, &c.	62	623	685	1·8	—
Diseases of the Nervous System	26	60	86	·2	—
Diseases of the Eye - -	2,815	2,377	5,192	14·2	·6
Diseases of the Ear - -	570	346	916	2·5	·1
Diseases of the Nose - -	49	106	155	·4	—
IV. Diseases of the Circulatory System :					
Disease of the { Functional -	1,079	2,106	3,185	8·7	3
Heart - { Organic - -	346	1,564	1,910	5·2	·2
Aneurism - - - -	72	246	318	·8	—
Varicose Veins - - -	174	316	490	1·3	—
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - -	2,478	1,889	4,367	11·9	·5
Glandular Diseases - -	95	151	246	·6	—
VII. Diseases of the Respiratory System :					
Diseases of the Larynx - -	36	100	136	·3	—
Catarrh - - - -	14,082	1,168	15,250	41·7	1·8
Hæmoptysis - - - -	191	681	872	2·3	·1
Asthma - - - -	104	64	168	·4	—
Other Diseases of the Lungs -	3,087	6,819	9,906	27·6	1·2
VIII. Diseases of the Digestive System :					
Cynanche - - - -	5,322	1,115	6,437	17·6	·7
Diseases of the Mouth, Teeth, &c. - - - -	146	21	167	·4	—
Dyspepsia - - - -	2,555	1,367	3,922	10·7	·4
Dysentery - - - -	134	655	789	2·1	—
Diarrhœa - - - -	2,435	575	3,010	8·2	·3
Colic and Constipation - -	612	116	728	1·9	—
Hæmorrhoids - - - -	476	149	625	1·7	—
Hernia - - - -	447	83	530	1·4	—
Worms - - - -	170	-	170	·4	—
Other Diseases of the Stomach, Intestines, &c. - - -	368	1,143	1,511	4·1	·1
Diseases of the Liver, Spleen, &c. - - - -	1,007	1,011	2,018	5·5	·2

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary Generative Systems :					
Diseases of the Kidneys -	331	1,329	1,660	4.6	.2
Diseases of the Bladder -	42	148	190	.5	—
Gonorrhœa - - - -	11,943	3,859	15,802	43.2	1.9
Diseases of the Organs of Generation - - - -	109	524	633	1.7	—
Stricture - - - -	450	2,135	2,585	7.	.3
Varicocele - - - -	86	64	150	.4	.6
Orchitis - - - -	3,421	1,880	5,301	14.5	.
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones, Joints, &c. - - - -	1,085	2,378	3,463	9.4	.4
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - -	22,038	3,750	25,788	70.6	3.1
Ulcer - - - -	17,183	11,348	28,531	78.1	3.5
Erythema - - - -	359	145	504	1.3	—
Diseases of the Skin - -	3,055	2,266	5,321	14.5	.6
Carbuncle - - - -	12	63	75	.2	—
Scabies - - - -	2,194	600	2,794	7.6	.3
Unclassed :					
Debility - - - -	973	2,543	3,516	9.6	.4
Delirium Tremens - -	182	551	683	1.8	—
Poisoning - - - -	65	230	295	.8	—
Wounds and Injuries :					
Wounds, Injuries, &c. - -	38,816	9,547	48,363	132.5	5.9
Burns and Scalds - - -	1,679	409	1,988	5.4	.2
Submersion and Drowning -	18	43	61	.1	—
Hanging - - - -	5	-	5	—	—
Suicide - - - -	6	-	6	—	—
TOTALS - - -	177,788	131,264	309,052	840.7	38.3

TABLE, No. 3. - - - - -
 SHOWING the Number INVALIDED from each - - - - -

CAUSE OF INVALIDING.	Achilles.	Agincourt, 1st Commission.	Agincourt, 2nd Commission.	Asia.	Bellerophon.	Black Prince.	Bocawen.	Brilliant.	Britannia.	Buzzard.	Cambridge.
I. General Diseases, Section A.:											
Continued Fever - - -	-	-	-	1	1	-	-	-	-	-	-
Erysipelas - - -	-	-	-	-	-	-	-	-	-	-	-
II. General Diseases, Section B.:											
Rheumatism - - -	-	-	-	-	1	-	-	-	-	-	1
Gout - - -	-	-	-	-	-	-	-	-	-	-	-
Syphilis { Primary	-	-	-	1	-	1	-	-	-	-	-
{ Secondary	-	-	-	-	-	-	-	-	-	-	-
Scrofula - - -	-	-	-	-	-	-	-	-	-	-	-
Phthisis - - -	-	-	-	9	2	1	-	-	-	-	3
Anæmia - - -	-	-	-	-	-	-	-	-	-	-	-
Dropsy - - -	-	-	-	-	-	-	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:											
Meningitis - - -	-	-	-	-	-	-	-	-	-	-	1
Paralysis - - -	-	-	-	1	-	-	-	-	-	-	1
Epilepsy - - -	-	-	1	-	1	-	1	-	-	-	-
Insanity - - -	-	-	-	1	-	-	-	-	-	-	-
Diseases of the Eye - - -	-	-	-	1	1	-	-	-	-	-	-
Diseases of the Ear - - -	-	-	1	-	-	-	-	-	-	-	-
Diseases of the Nose - - -	-	-	-	-	-	-	-	-	-	-	-
IV. Diseases of the Circulatory System:											
Disease of { Functional	-	-	1	1	1	-	-	-	-	-	-
the Heart { Organic	-	1	-	-	2	-	1	1	-	-	-
Aneurism - - -	-	-	-	-	-	-	-	-	-	-	1
Varicose Veins - - -	-	-	-	-	1	1	-	-	-	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands:											
Bubo (Symp.) - - -	-	-	-	-	-	-	-	-	-	-	-
Glandular Diseases - - -	-	-	-	-	-	-	-	-	-	-	-
VII. Diseases of the Respiratory System:											
Catarrh - - -	-	-	-	1	-	-	-	-	-	-	-
Hæmoptysis - - -	-	-	-	-	1	-	-	-	-	-	-
Other Diseases of the Lungs - - -	-	-	-	-	-	-	-	-	-	-	-
VIII. Diseases of the Digestive System:											
Cynanche - - -	-	-	-	-	-	-	-	-	-	-	-
Diseases of the Mouth, &c. - - -	-	-	-	-	-	-	-	-	-	-	-
Dyspepsia - - -	-	-	-	1	-	-	-	-	-	-	-
Dysentery - - -	-	-	-	1	-	-	-	-	-	-	-
Diarrhoea - - -	-	-	-	-	-	-	-	-	-	-	-
Hærola - - -	-	-	1	-	-	-	1	-	-	-	1
Other Diseases of the Stomach, &c. - - -	-	-	-	-	1	-	-	-	-	-	1
Diseases of the Liver, &c. - - -	-	-	-	1	-	-	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems:											
Diseases of the Kidneys - - -	-	-	-	-	-	-	-	-	1	1	-
Diseases of the Bladder - - -	-	-	-	-	-	-	-	-	-	-	-
Diseases of the Organs of Gene- ration - - -	-	-	-	1	-	-	1	-	-	-	-
Stricture - - -	-	-	-	2	-	-	-	-	-	-	-
Varicocele - - -	-	-	-	-	1	-	1	-	-	-	-
Orchitis - - -	-	-	-	-	-	-	-	-	-	-	-
XI. Diseases of the Organs of Loco- motion:											
Diseases of Bones, &c. - - -	-	-	-	-	1	1	-	-	-	1	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:											
Phlegmon and Abscess - - -	-	-	-	-	-	-	-	-	-	-	-
Ulcer - - -	-	-	-	-	-	-	-	-	-	-	1
Diseases of the Skin - - -	-	-	-	-	-	-	-	-	-	-	-
Unclassed:											
Debility - - -	-	-	-	-	-	-	1	-	-	-	2
Delirium Tremens - - -	-	-	-	-	-	-	-	-	-	-	-
Poisoning - - -	-	-	-	-	-	-	-	-	-	-	-
Wounds and Injuries - - -	-	-	-	-	1	-	1	-	-	-	1
TOTAL - - -	1	1	8	23	15	4	8	1	1	2	15

TABLE, No. 3.—SHOWING the Number INVALIDED from each

CAUSE OF INVALIDING.	Lion.	Martin.	Medua.	Mersey.	Minclaur.	Monarch.	Nankib.	Northumberland.	Orwell.	Pallas.	Penbroke, 1st Commission.
I. General Diseases, Section A.:											
Continued Fever	-	-	-	1	-	-	-	-	-	-	-
Erysipelas	-	-	-	-	-	-	-	-	-	-	-
II. General Diseases, Section B.:											
Rheumatism	2	1	-	-	1	-	-	1	-	-	-
Gout	-	-	-	1	-	-	-	-	-	-	-
Syphilis { Primary	1	-	-	-	2	-	-	-	-	-	-
{ Secondary	-	-	-	1	-	-	-	-	-	-	-
Scrofula	-	-	-	1	-	-	-	-	-	-	-
Phthisis	8	-	1	4	2	1	-	4	-	10	1
Anæmia	-	-	-	-	-	-	-	-	-	-	-
Dropsy	-	-	-	-	-	-	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:											
Meningitis	-	-	-	-	-	-	-	-	-	-	-
Paralysis	-	-	-	1	-	-	-	-	-	-	-
Epilepsy	-	-	-	-	-	-	-	-	-	-	-
Insanity	1	-	-	-	-	1	-	-	-	-	-
Diseases of the Eye	-	-	-	-	-	-	1	-	-	-	-
Diseases of the Ear	2	-	-	1	-	-	-	-	1	-	-
Diseases of the Nose	-	-	-	-	-	-	-	-	-	-	-
IV. Diseases of the Circulatory System:											
Disease of { Functional	2	-	-	1	1	-	-	2	1	-	-
{ Organic	4	-	-	-	-	1	-	2	-	-	-
Anæurism	-	-	-	-	-	-	-	-	-	-	-
Varicose Veins	2	-	-	-	2	-	-	-	-	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands:											
Bubo (<i>Symp.</i>)	-	-	-	-	-	-	-	-	-	-	-
Glandular Diseases	-	-	-	-	-	-	-	-	-	-	-
VII. Diseases of the Respiratory System:											
Catarrh	-	-	-	-	-	-	-	-	-	-	-
Hæmoptysis	-	-	-	-	-	1	-	-	-	-	-
Other Diseases of the Lungs	5	1	-	-	-	-	-	2	-	-	-
VIII. Diseases of the Digestive System:											
Cynanche	1	-	-	-	-	-	-	-	-	-	-
Diseases of the Mouth, &c.	1	-	-	-	-	-	-	-	-	-	-
Dyspepsia	1	-	-	-	-	-	-	-	-	-	-
Dysentery	-	-	-	-	-	-	-	-	-	-	-
Diarrhœa	-	-	-	-	-	-	-	-	-	-	-
Hernia	6	-	-	-	2	-	1	2	-	1	-
Other Diseases of the Stomach, &c.	2	-	-	-	-	-	-	-	-	-	-
Diseases of the Liver, &c.	-	-	-	-	-	-	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems:											
Diseases of the Kidneys	2	-	-	1	-	-	-	-	-	-	-
Diseases of the Bladder	1	-	-	-	-	-	-	1	-	-	-
Diseases of the Organs of Gene- ration	-	-	-	-	-	-	-	-	-	-	-
Stricture	2	-	-	-	-	-	-	1	-	-	-
Varicœle	-	-	-	-	-	-	-	-	-	-	-
Orchitis	-	-	-	-	-	-	-	1	-	-	-
XI. Diseases of the Organs of Loco- motion:											
Diseases of Bones, &c.	-	-	-	1	1	-	-	4	-	1	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:											
Phlegmon and Abscess	-	-	-	-	-	-	-	-	-	-	-
Ulcer	-	-	-	1	2	-	-	2	-	-	-
Diseases of the Skin	-	-	-	-	-	-	-	-	-	-	-
Unclassed:											
Debility	-	-	-	-	-	1	-	1	-	-	-
Delirium Tremens	-	-	-	-	-	-	-	-	-	-	-
Poisoning	-	-	-	-	-	-	-	-	-	-	-
Wounds and Injuries	2	-	-	-	2	-	-	1	-	-	1
TOTAL	46	2	1	13	17	6	2	20	2	6	2

continued from page 27.

Ship employed on the HOME STATION—continued.

[illegible]

TABLE, No. 4. - - - - -
 SHOWING the Number of DEATHS in each - - - - -

CAUSE of DEATH.	Achilles.	Agincourt, 1st Commission.	Agincourt, 2nd Commission.	Asia.	Bellerophon.	Black Prince.	Boscawen.	Brilliant.	Britannia.	Bézard.	Cambridge.	Dasher.	Dauntless.	Defence.	Duke of Wellington.	Duncan.	Excellent.	Figard.
I. General Diseases. Section A. :																		
Scarlet Fever - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Typhus Fever - - -	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-
Enteric Fever - - -	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Continued Fever - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erysipelas - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. General Diseases. Section B. :																		
Syphilis, Secondary - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Phthisis - - -	-	-	-	1	1	1	1	-	-	1	-	1	1	-	1	-	1	1
Cancer - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anæmia and Purpura - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dropsy - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
III. Diseases of Nervous System and Organs of Special Senses :																		
Meningitis - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apoplexy - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralysis - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Diseases of the Brain -	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
IV. Diseases of Circulatory System :																		
Disease of the Heart, Organic -	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	1	-	1
Aneurism - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-
VII. Diseases of the Respiratory System :																		
Hæmoptysis - - -	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Other Diseases of Lungs -	1	-	-	-	1	-	-	-	-	-	2	-	1	-	3	1	-	-
VIII. Diseases of Digestive System :																		
Dyspepsia - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Dysentery - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diarrhoea - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peritonitis - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disease of the Liver, &c. -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems ;																		
Diseases of the Kidneys - -	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Stricture - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :																		
Abscess - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbuncle - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unclassed :																		
Wounds and Injuries - - -	-	-	1	-	-	-	-	-	1	-	-	-	1	1	1	-	-	-
Drowned - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-
Suicide - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL - - -	2	1	1	8	1	3	1	1	2	1	4	2	3	3	9	2	6	2

SHOWING the

DISEASE OR INJURY.	Achilles.	Agincourt, First Commission.	Agincourt, Second Commission.	Asia.	Helton.	Hercules.	Implacable.	Impregnable.	Inconstant.	Indus.	Jackal.
I. General Diseases, Section A. :											
Small Pox - - - - -	-	-	-	-	-	-	1	-	-	-	-
Vaccinia - - - - -	-	-	-	5	-	-	-	-	-	-	-
Measles - - - - -	-	-	-	1	-	-	9	8	-	-	-
Scarlet Fever - - - - -	-	-	-	-	-	-	-	-	-	-	-
Typhus Fever - - - - -	-	-	-	-	-	-	-	-	-	-	-
Enteric Fever - - - - -	-	1	-	-	-	-	-	2	-	-	-
Relapsing Fever - - - - -	-	-	-	-	-	-	-	-	-	-	-
Simple Continued Fever - - - - -	-	-	-	13	-	11	-	-	-	-	-
Ague - - - - -	-	20	1	1	-	3	1	6	-	1	-
Remittent Fever - - - - -	-	-	-	-	-	-	-	-	1	1	-
Cholera - - - - -	-	-	-	-	-	-	-	-	-	-	-
Hooping Cough - - - - -	-	-	-	-	-	-	-	-	-	-	-
Mumps - - - - -	-	-	-	-	-	-	-	-	-	-	-
Influenza - - - - -	-	-	-	-	-	-	-	-	-	-	-
Erysipelas - - - - -	1	-	-	1	-	-	-	1	-	2	-
II. General Diseases, Section B. :											
Rheumatism - - - - -	5	9	26	56	-	26	12	32	19	28	4
Gout - - - - -	-	-	1	5	-	-	-	1	-	2	-
Syphilis { Primary - - - - -	6	11	8	41	4	37	3	4	7	25	2
{ Secondary - - - - -	1	5	-	13	1	21	1	1	2	16	-
Tumour Cystic - - - - -	-	-	-	-	-	-	-	-	-	-	-
Scrofula - - - - -	-	-	-	-	-	1	2	-	-	-	-
Phthisis Pulmonalis - - - - -	3	4	-	11	-	3	4	7	-	6	-
Epithelioma - - - - -	-	1	-	-	-	-	-	-	-	-	-
Purpura and Anæmia - - - - -	-	-	-	-	-	-	-	2	-	-	-
Dropsy - - - - -	-	-	-	-	-	-	-	2	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses :											
Apoplexy - - - - -	-	-	-	1	-	-	-	-	-	-	-
Sunstroke - - - - -	-	-	-	-	-	-	-	-	-	-	-
Paralysis - - - - -	-	1	-	1	-	-	-	-	-	-	-
Vertigo - - - - -	-	-	-	1	-	-	-	-	3	-	-
Epilepsy - - - - -	-	4	2	-	-	-	-	1	-	-	-
Neuralgia - - - - -	-	1	1	4	-	-	-	2	-	5	1
Insanity - - - - -	-	1	-	2	-	6	-	-	-	3	-
Other Diseases of the Brain, &c. - - - - -	-	-	-	1	-	1	-	1	1	-	-
Diseases of the Nervous System - - - - -	-	-	-	-	1	-	-	2	-	-	-
Diseases of the Eye - - - - -	-	5	5	7	-	10	1	9	3	10	-
Diseases of the Ear - - - - -	1	-	1	2	-	2	3	4	-	2	-
Diseases of the Nose - - - - -	-	-	-	-	-	-	-	1	-	-	-
IV. Diseases of the Circulatory System :											
Disease of the Heart { Functional - - - - -	2	1	8	1	-	-	-	4	-	2	-
{ Organic - - - - -	-	1	-	1	-	-	2	2	-	5	1
Pericarditis - - - - -	-	-	-	-	-	-	1	-	-	1	-
Aneurism - - - - -	-	-	2	-	-	-	-	-	-	1	-
Varicose Veins - - - - -	-	1	-	1	1	-	-	-	2	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands :											
Bubo (Symp.) - - - - -	-	1	2	3	1	2	1	-	-	1	-
Glandular Diseases - - - - -	-	-	-	3	-	-	-	-	-	-	-

TABLE, No. 5.—SHOW *continued.*

DISEASE OR INJURY.	Achilles.	Agricourt, First Commission.	Agricourt, Second Commission.	Asia.	Helton.	Hercules.	Implacable.	Impregnable.	Inconstant.	India.	Jackal.
VII. Diseases of the Respiratory System:											
Diseases of the Larynx	-	-	-	1	-	-	-	-	-	-	1
Catarrh	12	22	30	128	10	77	43	100	42	44	2
Hæmoptysis	-	1	-	5	-	-	-	-	1	2	-
Asthma	-	-	-	2	-	-	-	-	-	-	-
Other Diseases of the Lungs	1	-	4	7	-	2	20	21	1	19	-
VIII. Diseases of the Digestive System:											
Cynanche	5	2	-	19	5	37	9	23	3	9	-
Diseases of the Mouth, Teeth, &c.	-	1	-	1	-	-	-	1	-	-	-
Dyspepsia	3	1	-	32	4	94	2	2	1	12	1
Dysentery	-	-	1	3	-	1	-	-	-	-	-
Diarrhœa	-	2	-	23	2	21	1	3	8	19	4
Colic and Constipation	1	1	2	3	-	4	-	9	-	-	2
Hæmorrhoids	-	-	-	1	-	1	-	1	-	2	1
Hernia	-	3	1	3	-	2	-	4	-	4	-
Worms	-	-	-	1	-	8	-	-	-	-	-
Other Diseases of the Stomach, Intestines, &c.	-	-	-	1	-	3	-	1	-	2	1
Diseases of the Liver, Spleen, &c.	-	1	1	15	-	5	2	7	3	6	-
IX. & X. Diseases of the Urinary and Generative Systems:											
Diseases of the Kidneys	-	-	-	2	-	-	-	4	-	4	-
Diseases of the Bladder	1	1	-	2	-	-	-	-	-	-	-
Gonorrhœa	8	7	4	44	5	38	4	8	1	40	2
Diseases of the Organs of Generation.	-	2	-	-	-	-	-	-	-	-	-
Stricture	1	-	-	6	-	5	-	1	1	-	1
Varicocele	-	-	-	-	-	-	-	2	-	-	-
Orchitis	4	2	9	10	3	8	1	5	3	7	-
XI. Diseases of the Organs of Locomotion:											
Diseases of the Bones	-	-	-	1	-	4	-	-	-	-	-
Diseases of the Joints	-	-	-	1	-	3	-	-	-	2	2
Diseases of the Muscles, &c.	-	-	-	-	-	-	-	-	-	-	-
Diseases of the Bursæ	1	-	-	-	-	2	-	1	1	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:											
Phlegmon and Abscess	10	17	26	49	13	133	29	99	27	45	7
Ulcer	7	2	2	11	2	92	60	132	10	22	5
Erythema	-	-	-	1	-	-	-	13	-	1	-
Diseases of the Skin	3	5	1	8	1	12	5	9	3	8	-
Scabies	2	-	-	8	2	4	-	16	-	4	-
Unclassed:											
Debility	2	-	3	3	-	6	2	7	-	5	-
Delirium Tremens	-	-	-	7	-	-	1	-	-	2	-
Poisoning	-	1	-	-	-	-	-	-	-	1	-
Wounds and Injuries:											
Wounds, &c.	24	38	83	101	15	286	51	135	97	69	9
Burns and Scalds	-	1	6	5	-	6	5	3	4	2	-
Submersion and Drowning	1	-	-	-	-	1	-	-	-	-	-
Hanging	-	-	-	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-	-	-	-
TOTAL	106	177	253	636	65	358	276	700	258	448	46

Table Station—continued.

Lapwing.	Liberty.	Lion.	Martin.	Medusa.	Mersey.	Minotaur.	Monarch.	Victory.	Warrior.	Winchester.	Total.	DISEASE OR INJURY.
3	4	105	3	20	40	30	23	13	169	18	5	VII. Diseases of the Respiratory System:
-	-	-	-	-	3	3	-	1	1	-	2,607	Diseases of the Larynx.
-	-	-	-	-	-	-	-	-	-	-	31	Catarrh.
-	-	14	3	-	11	2	4	3	8	-	7	Hæmoptysis.
-	-	-	-	-	-	-	-	-	-	-	337	Asthma.
-	-	-	-	-	-	-	-	-	-	-	-	Other Diseases of the Lungs
2	2	20	5	1	4	36	14	-	59	1	865	VIII. Diseases of the Digestive System:
1	1	1	-	-	-	-	-	-	-	-	20	Cynanche.
3	-	17	1	6	23	4	31	-	10	2	545	Diseases of the Mouth, Teeth, &c.
-	-	-	-	-	-	-	-	-	-	-	12	Dyspepsia.
2	-	35	13	8	14	28	7	1	25	3	620	Dysentery.
-	-	-	-	1	4	6	2	-	11	1	164	Diarrhoea.
1	-	1	1	-	1	1	-	-	7	-	59	Colic and Constipation.
-	-	-	1	-	2	4	-	-	3	-	74	Hæmorrhoids.
-	-	5	-	-	-	-	-	2	3	-	27	Hernia.
-	-	-	1	-	-	-	4	-	1	-	43	Worms.
-	-	-	1	-	1	3	2	-	-	-	101	Other Diseases of the Stomach, Intestines, &c.
-	-	-	-	-	-	-	-	-	-	-	-	Diseases of the Liver, Spleen, &c.
-	-	5	-	-	-	1	1	-	1	-	42	IX. & X. Diseases of the Urinary and Generative Systems:
-	-	-	-	-	-	1	-	-	-	-	16	Diseases of the Kidneys.
-	-	18	3	3	6	14	28	5	54	1	856	Diseases of the Bladder.
-	-	-	-	-	-	-	-	-	-	-	13	Gonorrhoea.
-	-	-	-	-	-	-	-	-	-	-	-	Diseases of the Organs of Generation.
-	-	8	1	-	2	4	-	1	1	-	71	Stricture.
-	-	5	1	5	5	13	10	1	26	1	12	Varicocele.
-	-	-	-	-	-	-	-	-	-	-	303	Orchitis.
-	-	-	-	-	1	-	-	-	-	-	29	XI. Diseases of the Organs of Locomotion:
-	-	-	1	-	3	2	-	-	3	-	35	Diseases of the Bones.
-	-	-	-	-	-	-	-	-	-	-	2	Diseases of the Joints.
1	1	-	-	-	-	2	1	-	-	-	31	Diseases of the Muscles, &c.
-	-	-	-	-	-	-	-	-	-	-	-	Diseases of the Bursæ.
7	29	51	7	15	18	97	63	5	201	1	2,732	XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:
2	16	21	13	1	16	64	8	1	27	-	1,193	Phlegmon and Abscess.
-	-	-	-	-	3	-	-	-	-	-	36	Ulcer.
-	1	3	-	-	3	8	3	5	11	-	223	Erythema.
2	12	12	-	-	-	-	6	2	5	-	221	Diseases of the Skin.
-	-	-	-	-	-	-	-	-	-	-	-	Scabies.
-	-	6	-	-	3	-	7	-	-	-	23	Unclassed:
-	-	1	-	-	2	-	2	-	3	-	42	Debility.
-	-	-	-	-	1	-	-	-	-	-	19	Delirium Tremens.
-	-	-	-	-	-	-	-	-	-	-	-	Poisoning.
8	16	75	13	17	57	131	84	2	255	3	4,092	Wounds and Injuries:
1	-	2	1	-	4	10	6	-	6	-	165	Wounds, &c.
1	-	-	-	-	-	-	-	-	2	-	25	Burns and Scalds.
-	-	-	-	-	-	-	-	-	-	-	1	Submersion and Drowning.
-	-	-	-	-	-	-	-	-	-	-	1	Hanging.
-	-	-	-	-	-	-	-	-	-	-	-	Suicide.
47	85	530	90	97	284	608	370	53	1,095	36	19,802	- - - TOTAL.

MEDITERRANEAN STATION.

Medi-
terranean
Station.

Class I.
Sect. A.

IN the year 1869, the squadron on the Mediterranean Station comprised nineteen vessels, viz.: six ironclads, one fourth-rate, two sloops, two gun vessels, four steam vessels, three gunboats, and one receiving ship, permanently stationed at Malta. The Returns from thirteen of the vessels were for the whole year, and from the remainder for periods varying from three to six months. The mean force, corrected for time, was 3,970, and the total number of cases of disease and injury entered on the sick-list 5,669, which is in the ratio of 1,427·9 per 1,000, being an increase, compared with the preceding year, equal to 64·8 per 1,000. Of these, 157 were invalided and thirty-two died, the former being in the ratio of 39·5 and the latter of 8· per 1,000. Compared with the preceding year there was an increase in the invaliding rate to the extent of 12·7 per 1,000, but the ratio of mortality was lower by ·7 per 1,000.

The average daily loss of service from General Diseases, Section A., or Febrile Group, was in the ratio of 5·4 per 1,000; from Section B., or Constitutional Group 8·2; from diseases of the nervous system and organs of the special senses ·5; of the circulatory system ·4; of the absorbent system and ductless glands ·3; of the respiratory system 2·9; of the digestive system 3·1; of the urinary and generative systems 2·8; of the organs of locomotion ·5; of the cellular tissue and cutaneous system 13·5; from unclassified diseases 1·; and from wounds and injuries of various kinds 11·4. The average number of men daily on the sick-list was 210·8, which is in the ratio of 53· per 1,000, being an increase, compared with the preceding year, equal to 1·7 per 1,000.

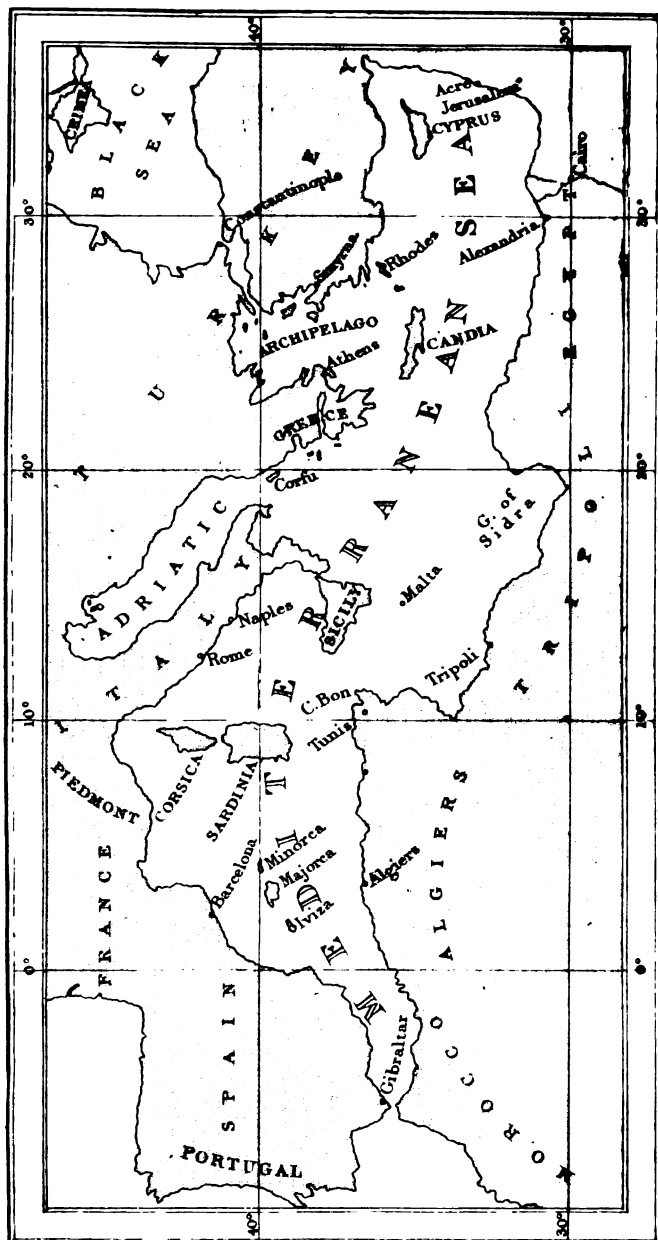
I. General Diseases.—Section A., or Febrile Group.

There were twenty cases of measles, one of typhus, eight of enteric fever, 143 of simple continued fever, fifty-one of ague, twenty-five of remittent fever, one of mumps, 198 of influenza, and twenty-seven of erysipelas, under treatment during the year; and of these, six cases of ague, one of remittent fever, and one of influenza were invalided; and three cases of enteric fever had a fatal termination.

Measles.—There were four cases of this form of eruptive fever in the Caledonia, one in the Lord Warden, one in the Rapid, and fourteen in the Royal Oak.

In

MEDITERRANEAN STATION.



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In the Caledonia the first case of measles occurred on the 15th of March, after the vessel had left Malta for Naples. The surgeon* says:—"Previous to the appearance of this case several had occurred on board the Royal Oak, the seizures extending over a considerable period. All these, as soon as declared, were removed to Bighi Hospital, but the disease did not entirely cease until the whole of the bedding of the crew was landed at the hospital, and thoroughly washed and aired. Our first case happened in the person of a robust, healthy young man, one of the barge's crew. His duty took him daily to the admiral's house in Valetta, where he was employed the greater part of the day, returning on board to sleep. Measles was at the time prevalent amongst children on shore, but the patient was not aware of having visited any house where it existed.

The sick-bay being almost empty on the occurrence of this case, one side of it was screened off, and the patient placed there, whilst any unnecessary communication was cut off, and carbolic acid kept constantly and freely scattered about. The symptoms proved very light, and he convalesced satisfactorily. After a short interval, and when at Naples, two other cases broke out, in neither of which could the source of infection be traced. The patients had not been in the sick-bay since the first man's illness, neither did they belong to his mess, nor even to the adjoining one. Immediately the disease declared itself they were removed to the sick-bay, and with the first man kept perfectly separated from the other sick as well as from visitors to the bay, until after our return to Malta, where the means were procurable of having their bedding and clothes well washed and aired before they were allowed to return to their messes. We then hoped that no further case would occur, but on the 10th of April another presented itself, and, being in Malta, he was sent without delay to Bighi Hospital. As in the other cases, no trace of the source of infection was discoverable. All the cases proved very slight indeed, and since their occurrence no others have shown themselves."

A single case of measles occurred in the Lord Warden, in the person of a Marine who had joined the ship from the Revenge, on board of which a Marine in the next mess to him suffered from the disease. There was also a single and very mild case of measles in the Rapid; it occurred at Malta in the person of an officer, who was at once sent to hospital.

In the Royal Oak, in which there were fourteen cases of this exanthem, the surgeon* says:—"Early in the year we were subjected to a partial epidemic of measles, which was introduced to the ship from the shore at Malta, where it was then very prevalent. The type was mild, with very light febrile symptoms. The means adopted for its check proved effectual, namely, that of constant supervision of all men who were apparently or decidedly labouring under catarrhal symptoms, immediate and complete segregation of suspected cases, and finally the lower deck was cleaned out, white-washed all round, the deck scrubbed with disinfectant powder, and well

* Surgeon J. G. T. Forbes.

† Surgeon W. H. Clarke.

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well ventilated by means of "bogies" and windsails. The men's clothing and blankets were all washed at the Hospital Steam Lavatory at Bighi; general leave on shore was prohibited; the men and officers, as their attacks became declared, were at once removed to the Naval Hospital, and so the disease disappeared, and we left Malta for the Piræus. Up to this time there were thirteen cases, but on our return to Malta to be docked we had another solitary case in December.

Typhus Fever.—A single case of this alarming form of fever occurred in the person of a seaman of the *Enterprise* at Barcelona. The attack was of great severity, but the man recovered. The surgeon* of the ship observes:—"This man had a great struggle for life. There was no hospital to send him to, but fortunately we were enabled to procure plenty of ice, which helped to combat the head symptoms. I have no doubt that malaria at the port of Barcelona was the exciting cause of the attack. The fever was somewhat peculiar in its character, being of the relapsing type at first, and running into pure typhus. The man was well isolated from the rest of the ship's company in the battery, and no other case occurred."

Enteric Fever.—There were eight cases of this insidious and dangerous form of fever in the squadron; of which three proved fatal. Three cases occurred in the *Caledonia* in her second commission, two in the *Cruiser*, and three in the *Newport*.

In the *Caledonia* the three cases of enteric fever occurred simultaneously with an epidemic of febrile disease of a somewhat mixed character. The staff-surgeon† of the vessel has divided the cases occurring during this epidemic into three classes; first, enteric or typhoid fever with specific eruption, of which the three cases noted above are the examples. Second, enteric fever without spots; of which there were twenty-two cases; and, Third, influenza enterica; of which there were 198 cases.

On Table I. the first of these classes appears under the head of Enteric Fever; the second under that of Continued Fever; and the third under that of Influenza. As these different forms of febrile disease occurred at the same time, it is thought better to consider them altogether in this place, and to give the report of the staff-surgeon in detail, as it presents many features of considerable interest. It may be premised that the crew of the *Caledonia* which suffered from this epidemic had only recently arrived from England, having been brought out in the *Revenge*, which vessel took home the old crew which had been thus relieved. On the passage out, the general health of the men was very indifferent, owing to the prevalence of an epidemic which commenced very soon after leaving England, in the form of "febrile catarrh," accompanied by inflammatory sore-throat

* Surgeon P. W. Wallace, M.D.

† Staff Surgeon J. Cotton, M.D.

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throat of a low type, and great prostration. One of the medical officers* remarks:—The weather at this time was wet and sunless, ventilation was arrested in consequence of the necessity of keeping the ports closed, which also prevented the drying of the decks, the whole tending to render the air between decks, raw, unpleasant, and much resembling a London mist. This continued until passing Gibraltar, when we suddenly came into almost tropical heat. With the change of temperature the character of the epidemic underwent modification; the throat affections subsided, and the cases appeared to class themselves under two heads, viz.: I. those with intestinal irritation; and II. those in which intense paroxysmal headache and severe pain in the cardiac region formed the principal points of observation."

The staff-surgeon thus describes the condition of the crew on their passage out, and after joining the *Caledonia*:—"During the necessary exposure consequent on embarkation at Plymouth, many of the men had their beds, and nearly all had their clothes, wet; and, as rain continued during three days after leaving, we had every circumstance conducive to the spread of contagious and infectious poison, namely, moisture, heat, and bad ventilation. Shortly after our departure the numerous cases of cynanche and catarrh presented many symptoms which made me apprehensive of an outbreak of scarlatina. About one-third of these cases evinced symptoms of very unusual depression and debility; the skin was cold and clammy, the pulse weak, the mucous membrane of the mouth and fauces presented a most unpleasant erysipelatous hue; men were giddy and faint, and many complained of pain affecting the left thoracic region, the cause of which was not apparent on careful stethoscopic examination. From the period of our escape from the rainy season in England until our arrival in Malta, the voyage had been in every way favourable, and the temperature such that blue clothes were worn up to the latter period. Summer and the sirocco wind, however, had fairly set in, and we found the weather at Malta excessively hot, close, and oppressive.

"The *Caledonia* lay moored in the Grand Harbour. The old crew had been living in the *Hibernia* since the 26th of April, and the vacated ship was a perfect pattern of neatness, cleanness, and good order. During the interim of nearly a month, a working party had been engaged in scraping, cleaning, and whitewashing their old ship, which always has been in remarkable order. In short, no crew ever joined a ship under circumstances more apparently favourable.

"Malta, at the time of our arrival, was remarkably healthy; on the day after (the 23rd), the number of sick of the whole fleet in harbour (ourselves excepted) only amounted to eighty, and the number in hospital to twenty. Our own sick-list was large, forty-one, but the only peculiarity about it was the prevalence of the typhoid influence described.

"The process of exchanging the *Revenge* for the *Caledonia* was rapidly effected on the 27th, and was very trying to men who had

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* Assist. Surgeon Belgrave Ninnis, M.D.

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so quickly exchanged the cold weather of England for the tropical heat existing at Malta; and the different nature of the two ships required some time to be properly understood. The Caledonia is a wooden line-of-battle ship converted into a frigate and armour plated. Thus the orlop deck becomes our present sleeping, or lower deck. Orlop decks have ever given trouble as regards ventilation, and this is increased in the Caledonia by the immense space taken up by the engines, and the increased thickness of her sides, which of course renders access of air through the scuttles more difficult. Improvements had, however, been effected by introducing fourteen tubes, each six inches in diameter, which open syphon-fashion on the upper deck, and thus assist in ventilating the men's quarters. The hollow iron masts have also been very imperfectly utilised for the purpose of ventilation. In cool weather there is sufficient circulation of air for comfort and respiration. In warm weather, and especially at sea, there is sufficient air for respiration only. Our great difficulty is during oppressively hot weather, when there is no breeze. In these ironclads, under such circumstances, the sun's rays are immediately conveyed by the iron casing to the wooden lining. Wood is very slow in absorbing heat; unfortunately it retains heat, so acquired, long, and parts with it gradually. Thus, during the southern summer the thick wooden lining gives off a uniform high temperature during the night, cooling in time to receive a fresh supply next morning. Under such circumstances the normal temperature of our sleeping deck is from 85° to 90°, and our main deck is little better, as modern ports are small and modern guns large.

"Our rapid entrance into this temperature 'fagged' the men very much, as they slept badly at night, and the usual short nap at dinner-time was impossible. In fact, after meals, the men usually looked as if they had just escaped from the early stage of a Turkish bath.

"On the 5th of June the ship departed for exercise, returning on the evening of the 17th. It was during this interval that the typhoid influence which had apparently accompanied us since leaving England acquired the character of an epidemic. On the 16th of June, in the vicinity of Malta, and eleven days after being at sea, about 11 p.m., nearly fifty of the ship's company, and some of the officers, were suddenly attacked with diarrhoea. From the 5th to the 16th of June thirty anomalous cases had occurred, but on the 17th we had eight sick; and, from the 17th to the 30th of June (inclusive) the number was ninety-four. Total for June, 124 cases.

"I am inclined to attribute the outbreak of diarrhoea on the night of the 16th to the same poisonous influence as that occasioning our epidemic, and consider it simply as an instance of the culmination of the poison. From this date it appeared to acquire a certain infectious power so far as the men in the Caledonia were concerned. Every one acquainted with the public service knows how fanciful men are in the causes they assign for attacks of this kind. Most of the men supposed that the bowel complaint had arisen from preserved meat they had eaten on the previous day; some fancied that it had resulted from drinking distilled water which had passed through a leathern

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leathern tube, which might previously have been used for salt water. I, myself, at the time, thought that it might have occurred from a sudden change of temperature during the night. On subsequent careful inquiry, however, it turned out that some men had diarrhoea who had eaten no preserved meat, and others diarrhoea who had drunk no water. Unfortunately for my own theory, the night had been a good honest tropical night, warm throughout, and with no change whatever to disturb its serenity.

"Our 'Influenza Enterica' attacked its victims in a form which now may rapidly be described. In probably one-fourth of the cases a man would present himself with a very pale face and a weak slow pulse; the skin was cold, the respiration laboured; the breath seemed cold and clammy, like the skin. Headache was sometimes complained of, but more frequently vertigo, and soreness of the limbs, and the individual seemed ready to faint. Almost invariably there was thoracic pain, confined to the left side. In these undeveloped cases the patient had usually a whitish tongue. These symptoms lasted from one to three days, and not unfrequently there was no pyrexia whatever. Long-continued debility, however, usually followed, and I may state, from unpleasant personal experience, that the latter symptom was most troublesome.

"A considerable number likewise suffered from complaints to which they had become liable, either from constitutional tendency or from previous service in unhealthy climates. Some have subsequently been invalidated for suspected tubercle, some for rheumatism, some for dysenteric diarrhoea contracted in China; others appeared to be left particularly subject to the noxious influence of the usual station fever. So much for what may be termed simple cases.

"In the great majority, however, in addition to the symptoms described, the patient had a red irritable tongue, and erysipelatous redness of the whole buccal mucous membrane. Such individuals had invariably a troublesome diarrhoea, in a few attended with nausea and sickness, and in nearly all with pyrexia, by no means, however, well marked, recurring at uncertain intervals, and probably more from gastric and intestinal irritation than from any other cause. In these the common circumstance was observed, that all attempts to check the diarrhoea were invariably followed by exacerbation of the fever; and mild laxatives, with a nourishing and more stimulating diet, were best adapted for the patient's welfare.

"In the end of June the epidemic appeared to be nearly gone, but on the 7th of July we proceeded to the trying summer climate of Sicily and Naples, and there was a renewal of the disease, which finally only left us towards the end of September, when probably nearly every susceptible person on board had been attacked. The disappearance of the disease seemed assisted by a cruise outside the Mediterranean, and the general health of our young crew was thereby greatly benefited; indeed nothing more unfortunate could well have occurred than an outbreak of the epidemic in question in early summer; it left men weak and unfit for hard work during the whole hot weather, and the cases of debility and of sunstroke which appear in the Nosological Return are simply the consequences that might be expected from this cause. Curiously enough, the termina-

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tion of the epidemic was marked by the same phenomena observed soon after leaving England. We had again a doubtful form of cynanche and tendency to lung complication. Finally we had a small plague of boils, herpes, and eczema. Nearly one-third of our numerous boils and slight injuries evinced a herpetic circle, or had eczematous eruption, or some spots of impetigo.

" In reference to the nosological arrangement of the disease, I stated in the first Return for June, that the lapse of individuals so affected into evident typhoid was the termination chiefly to be feared, and therefore I classed them all under the heading of Simple Continued Fever. Such an arrangement at the time was absolutely necessary. In the carefully corrected return for this Journal the term Continued Fever appears illogical for a form of disease which so frequently presented the peculiarity of continuing without fever, and I have considered it more correct to class all such cases as 'Enteric,' dividing them by the usual letters. Under the letter A. are comprised three cases with the usual abdominal eruption of what in England and France is generally considered as true typhoid; under B. are cases of the usual station fever, which appear to me in well-marked cases to differ from the true typhoid solely in the absence of abdominal eruption. I consider them to have been mild cases of typhoid or enteric fever. The cases of our epidemic have been selected as carefully as possible, and classed under C.

" A. Typhoid with roseoloid abdominal spots. Three cases; one was seven days under treatment on board, and sixty-four in hospital. Another was four days under treatment on board, and fifty-seven in hospital. Another, a bad case, was twenty-eight days on board, and remains in hospital.

" B. Enteric fever: station fever; no spots. Usual typhoid remissions; tendency to pleuro-pneumonia and diarrhœa. According to its usual custom in mild cases, tending to spontaneous convalescence after a few days, but in a large number leaving the patient long weak and cachectic, and predisposed to constitutional disease. Total number of cases, twenty-two; invalided from hospital, four; remaining in hospital, one. Average total time unfit for duty, including hospital time, forty-one days.

" C. Influenza Enterica. Great depression of the heart's action; thoracic pain of left side; lassitude and debility, long continued; an apparent tendency to erythema of the gastro-pulmonary mucous membrane, usually attended with diarrhœa, disease tending to lapse into enteric fever and pleuro-pneumonia. Pyrexia uncertain in uncomplicated cases; great disposition to herpes, eczema, and erythema. Total cases, 198. Sent to hospital, forty-nine; subsequently invalided from hospital, twelve; from the ship, eleven. The causes of invaliding appear to have been: tubercular deposit, or plastic deposit from pleuro-pneumonia, three; bronchitis, one; chronic gastritis, two; chronic diarrhœa, two; debility, anæmia and palpitation, fifteen. Total invalided, twenty-three.

Origin and latent Period.—Our three cases of evident typhoid appear to have been contracted while the ship was at Malta. In the

the first two cases I considered the latent period as from eight to sixteen days, supposing the fever originated at Malta. If, however, we suppose that typhoid may not only originate from sewage and other poisons, but occasionally prove infectious, the latent period may have been eight or nine days in both cases, as the second man may have received the disease from the first. Both men were stokers. The third case appears likewise to have caught fever at Malta, but we had no opportunity of judging as to the latent period in his case, as the ship was in Malta from the 13th of October to the 4th of November, and the disease appeared on the 5th of November, the day after proceeding to sea.

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"Of the cases of station-enteric fever, twenty-two in number, I may remark that the majority appeared likewise to derive their origin from Malta, but others from Sicily and Naples, a few from Gibraltar. It appears an open question if, under certain conditions, this disease likewise may not propagate itself by infection. Sufficiently accurate information as to the latent period could not be obtained; but in our severest case, where the patient appears to have been infected at Malta, the disease manifested itself nine days after leaving the island.

"One peculiar form of sickness appears, as already stated, to have originated from a typhoid influence, which left England with us in the *Revenge*, and finally assumed an epidemic form in this ship while the latter was at sea, near Malta, in the middle of June. At first the poison appeared chiefly confined to the Marines and the adjacent messes. None of our stokers were attacked until the 17th. As may readily be supposed, in a ship with so much sickness during the summer, cases became much complicated with slight forms of sunstroke, vertigo from heat, and debility after the month of June; I therefore confine the following Table to that month:—

June :	Nos.		
Marines, and marine petty officers on board	96	38.5	per cent. attacked.
Able seamen	89	12	" "
Leading seamen	19	10.5	" "
Ordinary seamen	123	19.5	" "
Boys	96	25	" "
Stokers	42	7.1	" "
Artificers, 18; petty officers, artificers, 18	36	22.2	" "
Petty officers (artificers and leading stokers deducted)	59	11.8	" "
Warrant officers, all attacked	3	100	" "
Gun-room officers	18	16.6	" "
Ward-room officers	17	5.8	" "

"I have endeavoured to obtain information as to the period which intervened before individuals newly joining the ship during its endemic period were attacked. In July four men returned from gaoi considerably debilitated.

"Two had symptoms	- doubtful	- 24 hours after joining.
One	" - evident	- 3 days "
One	" - evident	- 4 days "

"A midshipman joined during the height of the influence; he was taken ill twelve days after joining (in June). In August the weather

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weather was cooler, and the poisonous influence more feeble. A boy was taken ill after being on board four days, and a Marine after being twelve days on board. These peculiarities caused me to believe that the disease possessed infectious properties, which required concentration of sick individuals as well as a high temperature. My impression likewise is, that when the human body had received the poison, the period of incubation was short. It will be remembered that we only remained fourteen days in Malta after arriving there, and that the disease assumed its epidemic form eleven days after being at sea."

"On our return to Malta after the outbreak, I strongly advised that, in place of transferring our ship's company to the guardship here (Hibernia), the Caledonia herself should be hauled broadside to the wind in Bighi Bay; the men excused from arduous duties during the heat of the day, and that cases of sickness should be largely sent to hospital, in order as much as possible to prevent the concentration of the poison on board. These simple means, with an extra issue of cocoa to the men immediately after they rose in the morning, appeared highly successful, and I hoped at the time that we should have the ship tolerably healthy by the end of June.

"In these heavy ships at sea, however, ventilation is sadly interfered with, as it is very seldom indeed that the lower deck scuttles can be kept out, and from this want of ventilation, and the re-application of a good steady heat when we again put to sea, we had a further manifestation of the typhoid influence. No doubt what was required was a cruise to some colder region.

"The reasons for strongly objecting to transfer our men to the Hibernia are evident. The Caledonia, as a mere ship, is perfectly healthy, and the advantage of changing one ship for the other would have solely been that from absence of iron-plating; in the Hibernia our men would have slept better in consequence of the lower temperature at night. It appeared quite certain, however, that if we had exchanged, our men would again have been subjected to great fatigue and various forms of exposure. They would have been engaged in removing tanks, scraping bilges, whitewashing holds, and, in short, in duties almost certain to be followed by a development of poison, which otherwise the innate strength of their constitutions might have enabled them to shake off. My belief is, that our comparatively trivial sickness would have been converted into malignant fever, and our new crew would have been disorganised, and most certainly they would not have felt themselves safe in the Caledonia during the rest of the commission.

"At the time it was recommended that the ship should be sent to Bighi Bay, I likewise recommended that as soon as possible she should be detached from the squadron and sent to Corfu until perfectly healthy. Unfortunately the number of ships in the station at that time was so small, that it may be doubted if the absence of the Caledonia was compatible with the efficacy of the fleet; and as none of the other ships suffered from our epidemic, we have no cause for regret.

"I may here remark, that in disposing of our crew at night, we had

had as many as the place could accommodate on the main deck; but in a similar case of the kind, I should strongly recommend that an awning should be spread, and that as many of the crew as possible should sleep on the upper deck.

The following Table gives the febrile cases as they occurred in the respective months :—

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MONTHS.	Number of developed Typhoid Cases.	Number of Enteric Cases or Station Fever.	Influenza Enterica.
June - - - - -	- - -	- - -	124
July . - - - -	- - -	2	45
August - - - -	2	15	23
September - -	- - -	3	6
October - - - -	- - -	2	—
November - - -	1	—	—
December - - -	—	—	—
TOTALS - - -	3	22	198

In the cases detailed in the Journal the routine of treatment has been omitted, as much as possible, for necessary purposes of brevity. Indeed, the nature of these morbid poisons, or rather their action on the human frame, is now so well understood, that details of the kind are not requisite, for where we have no antidote we must ever be chiefly guided by the circumstance that, supporting the system judiciously, enables it to resist most abnormal influences, when circumstances of age and diet are in our favour. The success "of modern practice depends upon resisting disease more by supporting strength, and gaining time, than by emulating it in decreasing the vigour and number of our patients." In the form of complaint under consideration we were greatly assisted by the circumstance that in most cases we could sufficiently preserve the strength of the majority of our men to keep them out of bed, and in the open air on the upper deck; hence we were enabled, as much as possible in a ship, to prevent local concentration of the poison, when our departure from Malta removed us from the valuable assistance of the Naval Hospital; fortunately, too, this station is one in which supplies of most articles required from the shore for sick people are easily procurable, and I am much pleased to add that all our usual service supplies have been ample, and remarkably good in quality."

This excellent and exhaustive report is so complete that it calls for no comments. It appears to indicate the propriety of giving as much rest as possible to a new ship's company recently arrived on a station, particularly if they have already suffered from an outbreak of epidemic disease. The three cases of specific enteric fever were doubtless attributable to the pernicious influence of the atmosphere of Malta Harbour, where that formidable type of fever has for many years been endemic.

There were two cases of enteric fever in the Cruiser, both of which proved fatal. The first of these occurred at Malta, in the

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person of a young officer who was placed on the sick-list on the 4th of July with febrile symptoms of considerable severity, for which he was discharged to Malta Hospital on the 6th. On his admission there he was in a very prostrate condition, the fever being decidedly of the enteric type, accompanied with great abdominal tenderness, tympanitis, thickly coated tongue, frontal headache, diarrhoea, and delirium. Intense pulmonary congestion, especially of the right lung, quickly supervened, characterised by great dyspnoea, cough, and blood-viscid expectoration, fine crepitation, &c. The prostration finally became extreme, the stools became black and tarry-looking, and he died on the 8th of August. On post-mortem examination of the body, the right lung was found to be in a state of red hepatization, the lower third of the ileum externally of a port-wine colour, and internally of an ashy hue, while Peyer's glands were found in various stages of congestion, infiltration, hypertrophy, and ulceration; the surface of some being ash-coloured with a black areola. There was also slight effusion into the cerebral ventricles, and some congestion of the cerebral substance.

The second case was that of a Marine who was entered on the sick-list at sea, on the 25th of August, four days after leaving Port Mahon, and nineteen after leaving Naples. At Naples the ship lay close to the shore near the mouths of some open sewers, the smell from which at times was very offensive. At first the case presented all the symptoms of pneumonia of the left lung, which under treatment subsided; the cough, pain, and expectoration ceased, and he appeared to be going on well until the 2nd of September, when febrile symptoms again set in, with pain in the abdomen, diarrhoea, watery, light-coloured stools, and dry brown tongue, and from that time he gradually got worse, and expired on the morning of the 9th of September, seven days after the abdominal symptoms set in, and fifteen from his first entry on the sick-list.

In the Newport there were three cases of enteric fever, of which one proved fatal in the person of a boy who had been sent from the Azov, the tender to the Newport, to the *Hibernia*, on the 31st of July, for the treatment of a sprained ankle. While there, febrile symptoms set in, which proved of such severity that on the 7th of August he was sent to Malta Hospital, where he died on the 9th with all the symptoms of enteric fever. With reference to the cases generally, the medical officer* of the vessel observes: "Three cases of typhoid fever call for some remarks. Unfortunately they did not come under my observation at all, as they occurred in Her Majesty's ship *Azov* during our absence at Alexandria. Her Majesty's ship *Azov*, sailing gunboat, attached as auxiliary to the survey, was left at Pantellaria from the 6th to the 26th of July, whilst the Newport went to Alexandria. She lay during this time in the small harbour by the principal village. There was generally a sea breeze blowing in, but sometimes during calm weather a very unpleasant odour was manifest on board, owing to the proximity of the

* Assist. Surgeon Richard Cannon.

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the rocks below the village, which were used as a common necessary by the inhabitants. The greater part of the crew, including the two boys who afterwards suffered from fever, were away from the ship during most of the time she was at Pantellaria. The surveying party was camped on various parts of the island in the loftiest and healthiest situations, and on a ground of volcanic scoria. Owing to its insular position, the nature of its soil, the height of its mountains, and the constant sea breezes, Pantellaria offers no nidus for malaria. There was thus very little at Pantellaria to account for this outbreak of fever. On her return to Malta, the Azov lay in Sliema Creek, a healthy spot; thence the first case was sent with a sprained ankle to Her Majesty's ship *Hibernia*, then in the Grand Harbour, Valletta, and while on board her, fever of a malignant type developed itself in him with such intensity that he died three days after being sent to hospital, and five days from the invasion of the disease."

"The Azov soon after moved to Dockyard Creek for five days. Dockyard Creek in summer is a stinking sewer. There the second boy sickened of a mild typhoid fever, was sent to Malta Hospital, and returned to the Newport convalescent. He then suffered from a relapse of a mild character. At the time he was taken ill some of the other men of the Azov suffered from headache and slight febrile symptoms, which soon passed off. At this time, as always, the bilges of the Azov were kept sweet and clean, and no unpleasant odour was perceptible on board."

"The fever in the first case was probably acquired at Pantellaria, and due to emanations from the filth about the harbour. The brig had not been in Dockyard Creek at all. The second boy may also have acquired the germs of his fever at Pantellaria, but suspicion will point more strongly to Dockyard Creek, as the place whence the disease took its origin. No fever in an epidemic form existed at Pantellaria whilst the Azov lay there, nor is fever at any time common on the island."

Simple Continued Fever.—Of this form of fever 143 cases were under treatment during the twelve months, but they caused no loss to the service either by death or invaliding. They were tedious, however, in their progress to recovery; the average duration of each case on board ship and in hospital being between twenty-three and twenty-four days. The vessels in which they occurred in largest numbers were the *Caledonia*, the *Lord Warden*, and the *Rapid*. The form in which the disease presented itself in the *Caledonia* has already been fully detailed in the report from that vessel.

In the *Lord Warden* there were thirty-five cases of simple continued fever. The great majority of these were of the mildest character. In those which occurred during the warm weather, rigors, headache, general pains, and sharp diarrhoea with a loaded tongue, ushered in the febrile symptoms, which invariably passed off with profuse perspiration at night, leaving only a degree of weakness and of general soreness, instead of the sharp pains in the back and limbs of the preceding day.

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There were thirty-six cases of this form of fever in the *Rapid*, most of which were of a very mild character, terminating in recovery, in, on an average, between nine and ten days. Eighteen of the cases occurred at Patras, where a mild form of fever prevailed at the time, and ten on the coast of Syria during the summer. The most severe case occurred in the person of a mess servant who was 112 days under treatment. It was distinguished by most obstinate rheumatic complication, and by debility.

Ague and Remittent Fever.—Fifty-one cases of ague and twenty-five of remittent fever were under treatment during the year. The average duration of each case of ague on board ship and in hospital was between ten and eleven days; and of each case of remittent fever, nearly thirty-two days.

There were eight cases of ague, and four of remittent fever, in the *Antelope*. They were all contracted at Therapia. The medical officer* says "The summer had been unusually hot, and water very scarce, scarcely sufficient to irrigate the rich gardens of the valleys around; the winds light, and the dews extremely heavy. Such conditions seemed favourable to the development of any unusual severity or amount of the ordinary continued fevers. Still the total number of cases and the characters of the fevers were not extraordinary, except, perhaps, amongst the troops of a large camp on a hill, of 300 or 400 feet in height near the Sultan's Valley, opposite our anchorage on the Asiatic side. They were under canvas, underwent an amount of drill unusual to Turks, and a few days previous to the maximum amount of fever were exposed to some heavy rains. The mortality was, as far as I could learn, extremely small, though the fevers were insidious, obscure, of typhoid tendency, and of tardy convalescence, leaving much wasting and *spanæmia*, a type said to be the common one of the district.

"Ours commenced in the middle of August, and on the 7th of September, when the disease had nearly reached its maximum in the Bosphorus, and when I was anxiously waiting a further increase of its amount or severity, to urge a cruise in the Black Sea, or that of Marmora, we were ordered to sea for three weeks. Though we then passed a week at Smyrna, where some mild fever existed, we had no more cases. On our return to Therapia, fever had much abated there, and towards the latter half of October, altogether ceased. Twelve cases occurred on board; of these, the four remittents were in boys arrived from England a year previously, and who had never had fever before. Of the eight cases of ague, four occurred in three boys of the same batch; three were in men who had served in the West Coast of Africa, and on this station, in our ship, with immunity from anything like fever; one only in a seaman, who as a boy in this ship had had two very severe attacks of remittent on the West Coast of Africa. The remittent, commenced insidiously; the patient, after a few days' malaise, and probably an obscure exacerbation, presenting himself with languor, depression,

* Assist. Surgeon J. S. Levis.

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depression, headache, some congestion of eyes, and infra-orbital blush; very trifling vascular excitement, dryish tongue, covered with a thin white coat, skin hot, and slight thirst. For a day or two, distinct, but slight and brief chills ushered in a more declared pyrexia, with increase of headache, and moderate acceleration of pulse. After one to twelve hours, copious perspiration set in, and the patient soon reverted to his former state of obscure fever. The sweating stage was the most marked of all. For a few days things went on in the same manner; one tolerably well-pronounced, or several short, barely perceptible, exacerbations, followed by more or less copious perspiration, occurring each day. The pulse then began to subside and the tongue to clean, the headache ceased, and the patient felt cheerful and well, but wasting continued, the spanæmic expression increased, the appetite refused to improve, and copious perspiration, sometimes preceded by a very little headache, generally occurred in the evenings for several days. After this, as the appetite improved, recovery proceeded steadily, though slowly.

"The intermittents were all characterised by similar languor, persistent anorexia, wasting, and spanæmia. Two were peculiarly obscure; after the first faintly marked paroxysm, it was next to impossible to pronounce the seizures febrile. Four had tolerably well-marked attacks. All the above were pretty clearly of the tertian type. Another case had distinct tertian recurrences, whilst in each intervening evening he appeared to undergo a short feebly declared paroxysm consisting merely of headache and slight heat of surface, followed by moderate perspiration. This case might be set down as a double tertian or obscure quotidian. It seems almost absurd to note anxiously the exact type of these fevers, all badly pronounced, and shading into each other in such a puzzling manner. In fact, I believe it to be nearly impossible to thoroughly satisfy oneself on this matter without frequent use of the thermoscope and sphygmograph, which would doubtless yield results very neat and interesting at least, though I question their practical utility.

"Treatment consisted of a saline purge, quinine, and nursing. Having been told that the fevers here do not bear much quinine, I gave in my two first remittent cases only five grains three times a day. In the others, and most of the cases of ague, from fifteen to twenty grains, followed by ten grains three times a day for a day or two; then five grains three times a day until fever had clearly ceased, when two grains and a half were used three times daily, with chalybeates. Having shortly acquired more confidence, I treated one case without any, until it plainly showed itself to be a double tertian or obscure quotidian, when quinine soon put a stop to it. On the whole, I think the cases showed the advantage of the larger doses, and if I have the opportunity again, I shall push it further and more freely. The subsequent disproportionately severe and persistent effects of these little fevers were of course partly attributable to continuance within the range of malaria during a considerable part of their course, and had we remained during September at Therapia, I have no doubt they would have been much more formidable."

There were nineteen cases of ague and ten of remittent fever in
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the Cockatrice, which vessel was almost exclusively employed in the River Danube. With reference to the use of quinine in these fevers, the medical officer* observes: "Having seen many cases of intermittent and remittent fever amongst the inhabitants of the different towns upon the Lower Danube, as also amongst the crews of the merchant grain vessels, and having tried many remedies, I feel convinced that quinine must be given at some stage of the fever before the disease can be eradicated from the system. In the case of new comers upon the station, comparatively small doses are necessary; but in the case of old residents on the station, it is requisite to administer it in large doses. In all cases it is most beneficial to give it in combination with some anodyne, such as conium, hyosciamus, or Dover's powder. The former I have found the best concomitant."

..... "To produce the beneficial effects of quinine, I have invariably found it necessary to administer it until giddiness and ringing in the ears appear. As soon as these symptoms declare themselves, I have seen the paroxysms deferred and milder. At such a period of the fever I decrease the dose of quinine, but at the same time give stimulants and good diet. Conium, by its action as an anodyne and calmative, prevents all the irritability of the stomach, which is usually occasioned by large doses of quinine. I believe much more in the administration of the drug in the solid form than in solution. In the latter it almost always disagrees."

"As a prophylactic, quinine is most necessary, especially where men are employed in or near swamps, or upon boat service; but it must be given in large doses (six grains), night and morning, and combined with some stimulant, such as sherry or rum and water. I know many old stagers on the Danube works who would sooner go to their duty along the banks of the river without their dinner and tobacco than without their allowance of quinine. If they should, even for a day, forget their allowance, they are almost certain to feel indisposed, or have an attack of ague in a few hours."

In the Newport there were fifteen cases of ague. They occurred in men who had suffered from remittent fever during the previous year, while serving on the South Coast of Sicily. The medical officer says that relapses occurred so frequently amongst these men, that it was found necessary to invalid four of them; and he observes, that the climate of the Mediterranean seems peculiarly unfavourable to those who have acquired malarial fever on its coasts, and that change seems absolutely necessary to re-establish their health.

Influenza.—Under this head are classed 198 cases, which occurred as an epidemic in the Caledonia, and which have been already detailed.

* Assist. Surgeon A. Irwin Bolton, M.D.

II. General Diseases.—Section B.—Constitutional Group.

Rheumatism.—Of this disease 254 cases were under treatment, which is in the ratio of 63·9 per 1,000, being a reduction compared with the preceding year equal to 31·9 per 1,000. Of these, seventeen were invalided, which gives a ratio much in excess of 1868. The average duration of each case on board ship, and in hospital, was between eighteen and nineteen days. In 1868 the average duration was between seventeen and eighteen days.

The ship in which the largest number of cases occurred was the *Royal Oak*. The disease was considered attributable to the pernicious influence of the climate of the Mediterranean, but it was also conjectured that many of them had a syphilitic origin.

Syphilis, Primary and Secondary.—One hundred and fifty-three cases of primary syphilis, and thirty-nine of secondary syphilis were under treatment during the year, and of these, one case of primary, and seven of secondary syphilis were invalided. The ratio of cases of primary syphilis was 38·5 per 1,000, and of the secondary form of the disease 9·8 per 1,000. Compared with the preceding year, there was a reduction in the ratio of cases of primary disease to the extent of 9 per 1,000, and of secondary disease to that of 1·1 per 1,000. Each case of primary syphilis was on an average between thirty-four and thirty-five days under treatment; and each case of the secondary form nearly thirty-three days. The treatment was slightly more prolonged in both varieties than in the previous year.

The vessels in which the greatest number of cases of primary syphilis occurred were the *Caledonia*, *Endymion*, *Enterprise*, *Lord Warden*, *Prince Consort*, and *Royal Oak*.

There is nothing noteworthy in connection with the cases occurring in the *Caledonia*. Being a recently commissioned ship, they were mostly of English origin.

The surgeon of the *Endymion* says, with reference to the cases that occurred in that vessel, "A comparatively heavy amount of sickness appears under this head, exceeding that of any like period of the ship's commission. Every case originated at Gibraltar, where there is little or no supervision of prostitution. Fifteen cases were added to the sick-list, the other two being re-entries of patients returned from hospital on our leaving the station. A few more cases of a minor character were detected on the inspection of the men as lately ordered, but treated without being placed on the sick-list.

"It is unfortunate that some measures are not adopted at Gibraltar to prevent such a large amount of preventible disease. Whilst Malta is almost free from it, Gibraltar is a perfect hot-bed for all sorts of venereal diseases. Cadiz, which bears a bad name for venereal disease, did not produce a single case, although many special and privilege leave men were daily on shore. The cases of syphilis presented generally the character of the second class of sore, apt to produce bubo, and more intractable than those we met with last year at Trieste."

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Class II.
Sect. B.

There were fourteen cases of primary, and three of secondary syphilis in the *Enterprise*; but with the exception of the observation that they occasioned more than one-fourth of the total number of days' sickness in the ship, no information is given in connection with them.

In the *Lord Warden* there were eighteen cases of primary, and three of secondary syphilis. They were mostly contracted at the *Piræus*, at Naples, Messina, and Lisbon. Some of the cases were of considerable severity, but the information respecting them is scanty.

There were twenty-three cases of primary, and four of secondary syphilis in the *Prince Consort*. The majority of the cases of primary diseases were contracted at Naples, the Sicilian ports, and Gibraltar.

In the *Royal Oak*, there were thirty cases of primary, and eleven of secondary syphilis, concerning which the surgeon remarks: "Syphilis again engrosses attention, not alone from the cases it presents, and the loss of service it entails, but that there is such a hesitation in the minds of many to carry out preventive measures in connection with it. I found that, at Gibraltar, there is no regular police supervision of the public women, and we had many cases from that place that might have been avoided in an English garrison town if medical examination was insisted on, and hospital accommodation provided. At Malta and the *Piræus* matters are now different. There the police exercise their power, and medical inspections of the women are held.

Phthisis Pulmonalis.—Eighteen cases of this formidable disease were added during the twelve months; but it will be observed by referring to Table I., that twenty were invalided, and four proved fatal. This apparent discrepancy arises from the fact, either of several of the cases having been entered on the previous year, or from their original entry having been that of some other chest affection.

III. Diseases of the Nervous System, and Organs of the Special Senses.

Class III.

Under this head, seventy-four cases of various forms of disease were entered on the sick-list, of which ten were invalided, and one proved fatal. In this instance, the man, a marine, of Her Majesty's Ship *Hibernia*, was sent to Malta Hospital, on the 31st of July, for deafness, of which he had complained since the 13th, and which was at first accompanied by otorrhœa. On the 1st of September he had an epileptic seizure, and subsequently several paroxysms occurred which he described as being preceded by an aura. He became extremely cachectic; several boils covered with an ashy crust formed on his person, especially one over the left malar bone, which in size approached to a carbuncle, and extruded a fetid, ash coloured slough. There was also a tendency to passive hæmorrhage, both from this boil and from the urinary organs. The cachexia rapidly increased, there was paralysis of the right facial nerve, with stertorous breathing, involuntary passage of fæces, &c., and he expired on the 12th of September, a slight epileptic seizure having immediately preceded his death. On post-mortem examination of the body, the cerebral membranes

membranes generally were found much congested and thickened with considerable serous effusion into the sub-arachnoid spaces. The cerebrum, cerebellum, pons varolii, and medulla oblongata were apparently healthy, except that numerous bloody points were seen on incising the former.

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Class III.

IV. Diseases of the Circulatory System.

Sixteen cases of various forms of disease appear under this head, of which eight were invalidated, and two proved fatal. The ratio of cases is only one-half of that of the previous year, but there is a fractional increase in the invaliding and death-rates.

Class IV.

An interesting case of aneurism occurred in the case of a marine of the Caledonia. It is thus recorded by the surgeon* of the ship. "A very interesting case of popliteal aneurism occurred, which has been successfully treated by compression of the femoral artery in Scarpa's triangle. The patient, a tall, healthy, well made marine artilleryman, who had been on shore drinking and breaking his leave, was ignorant of having sustained any injury when on shore, but when he came on board he complained of pain about the left popliteal space, and on examination a pulsating tumour was found occupying the position of the artery. This was readily reduced by pressure, but it immediately regained its size on the pressure being removed. A distinct bruit was audible on applying the stethoscope, and the pulsation was distinct at whatever point felt. Satisfied of its aneurismal character, compression of the femoral in the anterior part of the thigh was attempted by securing a four pound weight over its course. This, however, proving irksome to the patient, the weight was removed, and pressure by means of the thumb was attempted as continuously as circumstances admitted. An instrument was meanwhile constructed by one of the engineers in the form of a horseshoe-shaped clamp, having a pad secured at the inner surface of one extremity, and an ordinary tourniquet at the other, by turning which, pressure over the artery could be regulated. This was so applied round the thigh, that compression was effected over the femoral artery, a few inches below Poupart's ligament, whilst the small padded point posteriorly, forming the counter pressure, and securing the instrument, afforded the patient very little inconvenience. He very soon appreciated the object of the treatment, and maintained pretty firm pressure during the day, relaxing it a little before going to sleep. The pulsations were almost from the first arrested, and after a few days' application of the instrument, they recurred very slightly on relaxing the pressure, and subsequently complete removal of pressure failed to re-induce pulsation. It was, however, continued for some time longer, when the tumour having disappeared, and no pulsation being perceived in the course of the artery at this point, the apparatus was dispensed with, and now several weeks have elapsed without the least appearance of

* Surgeon J. G. T. Forbes.

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Class IV.

of a relapse. He complains of a sense of numbness about the popliteal space, and occasional soreness of the hamstring tendons and calf of the leg after much walking, so that I have not yet sent him to duty, but get him to do nursing duty in the sick bay."

There were two deaths from organic disease of the heart. One of these occurred in the person of a boy of the Caledonia, who was placed on the sick-list on the 27th of December 1868, complaining of slight catarrhal symptoms, with debility and cough of two or three day's duration, but no expectoration. The pulse was weak and abnormally rapid, and the general appearance of the patient unhealthy. Under treatment the cough ceased, and no decided evidence of pulmonary disease was evinced. On the morning of the 8th of January he had no complaint, the appetite and spirits were good, and at 12.45 p.m. he remarked to the steward what a good dinner he had just made. In another minute he fell off his chair and expired. On post-mortem examination the body was observed to be by no means emaciated. The chest was rounded, and well formed anteriorly. Tubercle was found deposited in both lungs, but especially so in the right, where it was infiltrated, and at the apex a small cavity existed. The pericardium contained a considerable quantity of serum; the heart was slightly enlarged, and appeared perfectly flaccid. The ventricles of the brain contained a good deal of effused serum, and the cerebral substance was dotted with congested vessels.

The other fatal case was a petty officer of the Prince Consort, who was admitted into Malta Hospital on the 7th of July with a distinct cardiac bruit, systolic in time, and heard both at the left apex, and also, but more faintly, at the base. There was considerable palpitation, præcordial pain, occasional hæmoptysis, and severe dyspnœa. As the case progressed, the bruit at the base increased in duration and intensity, and became louder as the stethoscope travelled along the course of the ascending aorta, thus simulating an aneurismal murmur. He was invalided on the morning of the 10th of August, but the same evening he had an attack of vomiting, and copious expectoration of frothy matter containing large quantities of florid blood. The same state of things continued in a mitigated form during the night; he complained of intense abdominal pain, his countenance appeared blanched, and he expired on the morning of the 11th. After death two of the cusps of the aortic valves were found immensely thickened, and hypertrophied, and one of the cusps was dilated into a pouch by firm fibrous clots. The left ventricle was the seat of excentric hypertrophy.

V. and VI. Diseases of the Absorbent System and Ductless Glands.

**Class V.
and VI.**

Twenty cases of sympathetic bubo, and one classed as adenitis were under treatment, but there was nothing of any importance in connection with them.

VII. Diseases of the Respiratory System.

Under this head 493 cases of various forms of disease were entered on the sick-list, and of these nine were invalided, and four proved fatal.

An attack of hæmoptysis, caused by sudden fright, occurred in the person of a petty officer of the Royal Oak, who, when on duty on the fore-castle, exercising shifting top-gallant masts, observed the fore top-gallant mast topple over. The surgeon says, "Sudden fear and mental emotion came upon him, he fell back in a half faint, and emitted a large quantity of blood from his mouth. Being carried to the sick bay, I found him very anxious, and at intervals, in a very convulsive manner, he coughed up large quantities of frothy, bright coloured blood. He continued for some days coughing up blood. The treatment adopted was perfect quiet, resting in bed, with the head and chest elevated by pillows, and kept very cool. Draughts of dilute sulphuric acid and morphia were given every four hours, and low diet prescribed. The greatest relief in his case was experienced from constantly sucking clear ice. Some months prior to this occurrence, he suffered from an attack of pleurisy." He recovered, but as his symptoms began to show evidence of a phthisical tendency, he was brought forward for survey, and invalided.

Of the fatal cases one was the result of emphysema, one of bronchitis, and two of pneumonia. The case of emphysema occurred in the person of a seaman of the Caledonia, a coloured man, who was sent to Malta hospital for the treatment of syphilis. The hospital report, as furnished by the Deputy Inspector General,* is as follows:—"This man was discharged from hospital on the 30th of June, convalescent from a syphilitic sore, situated on the upper surface of the base of the penis. On the 20th of July he was re-admitted, the sore having broken out afresh. On the 4th of September icteric symptoms appeared, with constipation, clay-coloured stools, and dark-coloured urine. On the 10th February complication became apparent, with viscid muco-purulent sputa, diminution of the respiratory murmur in the left lung, bronchophony, great dyspnoea, and fever. These symptoms increased, the sputa became rusty and extremely tenacious; there was little or no dulness on percussion; the respiratory murmur was entirely lost on the right side, with fine crepitation below; rhonchus was also heard over the right lung; the dyspnoea became most urgent; the skin was covered with a profuse perspiration, and he expired at 12.10 p.m. of the 19th. On post-mortem examination of the body the heart was found slightly enlarged; the sub-pleural connective tissue enormously distended with air, so as to resemble large nodulated coils of intestine. The right pleura over the diaphragm was in a state of suppuration, and there was a small quantity of pus in the pleural sac. Both lungs were excessively collapsed; the right was also congested, and more collapsed than the left. There appeared to be no emphysematous state of the areolar tissue connecting the pulmonary lobules. The liver was slightly enlarged, and possessed a nutmeg-like appearance."

The fatal case of bronchitis was complicated with very extensive disease of the heart. There were no points of interest in connection with the cases of pneumonia.

* Deputy Inspector General W. T. Domville, M.D.

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VIII. Diseases of the Digestive System.

Under this head 770 cases of various forms of disease were entered on the sick-list, chiefly cases of cynanche, dyspepsia, and diarrhœa. Of the total number nine were invalided, and two proved fatal.

Diarrhœa.—Of this affection 264 cases were under treatment, the average duration of each case on board ship and in hospital being between four and five days. The vessels in which this affection prevailed were the Caledonia, the Lord Warden, and the Royal Oak. The nature of the diarrhœa which prevailed so extensively in the former vessel, and in so complicated a form, has been already described in the history of the epidemic fever which prevailed at the time,* and requires no further notice here. In the Lord Warden the attacks of diarrhœa occurred chiefly during the warm weather, and were of little importance.

There were forty-four cases of diarrhœa in the Royal Oak. The surgeon says :—“ This amount of diarrhœa chiefly arose in the summer months, when the ship, although more at sea, touched at various ports, where fruit was obtained in abundance. On one occasion our water, condensed on board, owing to a leakage in the pipes of the condenser, became brackish, and was used for a couple of days in that state. Being discovered so, it was at once discontinued, but produced several cases of intestinal disturbance, which we had to class under diarrhœa. One case alone was severe; it merged into dysentery, and the boy became very much emaciated; his convalescence was very prolonged, but eventually he made a good recovery.”

Worms.—Under this head twenty-five cases came under observation. Many of these were, however, recurrences of attacks in the same person. In the great proportion of cases the entozoon was the tœnia.

In the Antelope there were ten cases of worms, in eight of which the parasite was the tœnia. The medical officer says of tœnia :—“ There were eight entries, of which one was a warrant officer, who had been treated for tapeworm several times, on the West Coast of Africa, with small or moderate doses of ext. filicis. These brought away large quantities, but did not get him rid of all. On the 26th of April 1868, he took half an ounce, and repeated it after nearly three weeks. Thence to June, 1869, he declared himself perfectly free from worms, and in better health than he had been for years. Of the remainder, one was a re-entry, whom I had to place regularly on the list. The others were not excused from work during the treatment. Believing the limitation of the dose of ext. filicis to the usual $\mathfrak{z}\text{i}$, or $\mathfrak{z}\text{iss}$. of the posologist, to be unnecessary, and often unadvisable, I administered $\mathfrak{z}\text{iv}$. on an empty stomach in the morning, having the evening before cleared out the bowels by a purge composed of scammony, bitartrate of potass, and calomel. All food was then forbidden until the bowels had acted, which they generally did from two to five times in the forenoon under the influence of a little Epsom salts. In no case did I discover a head; but in each fragments very close to it made their appearance. In most I repeated the dose after ten days or a fortnight. In one only of these did any more frag-

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ments come away. In one, who avoided the second dose, the growth of the worm compelled a re-entry, as above alluded to. All have since appeared perfectly free from any. All occurred in the Bosphorus, between June and September. There I have never seen any fresh pork on board, and I believe that our men had little or none ashore or afloat. At Malta, where we had served from the 2nd of February to the 5th of May, they consumed a good deal. That consumed on board was usually brought off cooked, and not seen previously by the purchasers. I remember having often remarked on its fine appearance.

"On arrival at Malta I intend to institute an examination of all brought on board, as far as I can. Such must often be inconvenient in ships carrying only one medical officer; but, even in the best regulated vessels, the attempt to suppress tænia in this way seems to me to be almost hopeless. The efficient plan, in my opinion, would be careful examination of all the pork killed or offered for sale on the island, by competent public examiners. Medical men ashore can, of course, do much to prevent the disease in the pig; but, amongst the wretched peasant population of Malta, I am afraid their efforts would not be sufficient to stamp it out altogether."

In the *Lee* there were six cases of tænia, but their origin could not be ascertained. They were all consequent on a visit to Beyrout. The water used on board was condensed, but no information is given as to the food obtained by the men from the shore. Kousso was the agent successfully employed in the treatment of these cases.

There were five entries for tænia in the *Rapid*, four of these being in the person of one man, who had suffered from the parasite two years before, at Patras, and previously in China. Repeated doses of male shield fern, although dislodging at different times large portions of the worm, failed to effect a permanent cure. In the other man, the same remedy was effectual.

IX and X. Diseases of the Urinary and Generative Systems.

Of this class of diseases, 188 cases were entered on the sick-list; of which, 103 were cases of gonorrhœa and forty-six of orchitis, the majority of which were doubtless of gonorrhœal origin. The average duration of each case of gonorrhœa was about nineteen days, and of each case of orchitis between thirty and thirty-one days. No remarks appear necessary in connection with the other diseases of this class. Under the head of Diseases of the Kidneys, Bright's disease preponderated, and under Diseases of the Bladder, inflammation of that organ.

Class IX.
and X.

XI. Diseases of the Organs of Locomotion.

Under diseases of the bones and joints, twenty-two cases were entered on the sick-list; of which, nine were invalided. Each case was on an average thirty-seven days under treatment. The diseases which necessitated the invaliding were synovitis, disease of the vertebræ, and disease of the hip-joint.

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XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Class XII.
and XIII.

One thousand six hundred and seventy-six cases of various forms of disease were entered under this head; of which, 1,314 were cases of boils and abscesses. Of the total number of cases, nine were invalided and one proved fatal. In this latter instance the disease was abscess evidently connected with the lumbar vertebræ. The man, a marine of the Caledonia, had been sent into Malta Hospital for treatment in 1868, and from thence he had been invalided. On the homeward voyage it appears to have been considered inadvisable to take him beyond Gibraltar, where he was accordingly landed and placed in the Military Hospital, in which establishment he died. But little information has been obtained in connection with him.

Unclassed Diseases.

Delirium Tremens.—Four cases of this disease were under treatment; of which, one occurred in an officer, one in a leading seaman, one in an ordinary seaman, and the rating of the fourth person has not been ascertained.

Poisoning.—Of the two cases which appear under this head, one was occasioned by lead and the other by alcohol; both recovered.

Wounds and Injuries.

Four men sustained fatal fracture of the skull; one by falling from aloft, one by falling into a boat, one by falling over battlements, and one by falling over a cliff.

Nine men were drowned by the capsizing of boats, and two cases of suicide resulted from men jumping overboard while labouring under temporary insanity.

The total number of deaths was thirty-two, which is in the ratio of '8 per 1,000, being a decrease, compared with the preceding year, equal to '7 per 1,000.

Invalided.

Under General Diseases, Section A., eight persons were invalided, viz., six for ague, one for the sequelæ of remittent fever, and one for influenza; and under Section B., forty-nine, viz., seventeen for rheumatism, one for primary syphilis, seven for secondary syphilis, two for scrofula, twenty for phthisis, one for dropsy, and one for diabetes. Ten persons were invalided for diseases of the nervous system and organs of the special senses, eight for diseases of the circulatory system, nine for diseases of the respiratory system, nine for diseases of the digestive system, eleven for diseases of the urinary and generative systems, nine for diseases of the organs of locomotion, nine for diseases of the cellular tissue and cutaneous systems, thirty-one for unclassified diseases, thirty of which were from climactic cachexia, and four for wounds and injuries. The total number invalided was 157, which is in the ratio of 39·5 per 1,000, being an increase, compared with the preceding year, equal to 12·7 per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all DISEASES and INJURIES, and the Number INVALIDED and DEAD, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Measles - - - - -	20	5·	—	—	—	—
Typhus Fever - - - - -	1	·2	—	—	—	—
Enteric Fever - - - - -	8	2·	—	—	3	·7
Simple continued Fever - - -	143	30·	—	—	—	—
Ague - - - - -	51	12·8	6	1·5	—	—
Remittent Fever - - - - -	25	6·2	1	·2	—	—
Mumps - - - - -	1	·2	—	—	—	—
Influenza - - - - -	198	49·8	1	·2	—	—
Erysipelas - - - - -	27	6·8	—	—	—	—
II. General Diseases, Section B.:						
Rheumatism - - - - -	254	63·9	17	4·2	—	—
Gout - - - - -	2	·5	—	—	—	—
Syphilis - { Primary - - - - -	153	38·5	1	·2	—	—
{ Secondary - - - - -	39	9·8	7	1·7	—	—
Scrofula - - - - -	5	1·2	2	·5	—	—
Phthisis Pulmonalis - - - - -	18	4·5	20	5·	4	1·
Dropsy - - - - -	2	·5	1	·2	—	—
Diabetes - - - - -	—	—	1	·2	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses:						
Sunstroke - - - - -	5	1·2	—	—	—	—
Paralysis - - - - -	3	·7	1	·2	—	—
Vertigo - - - - -	4	1·	—	—	—	—
Epilepsy - - - - -	8	2·	3	·7	—	—
Neuralgia - - - - -	10	2·5	—	—	—	—
Insanity - - - - -	—	—	1	·2	—	—
Disease of the Brain, &c. - - -	—	—	1	·2	1	·2
Diseases of the Eye - - - - -	29	7·3	4	1·	—	—
Diseases of the Ear - - - - -	15	3·7	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—continued.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the (Functional -	7	1·7	1	·2	—	—
Heart - { Organic -	6	1·5	4	1·	2	·5
Aneurism - - - -	1	·2	—	—	—	—
Varicose Veins - - -	2	·5	3	·7	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	20	5·	—	—	—	—
Glandular Diseases - -	1	·2	—	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	31	7·8	2	·5	—	—
Catarrh - - - -	425	107·	—	—	—	—
Hæmoptysis - - - -	1	·2	1	·2	—	—
Asthma - - - -	1	·2	—	—	—	—
Other Diseases of the Lungs -	35	8·8	6	1·5	4	1·
VIII. Diseases of the Digestive System:						
Cynancho - - - -	162	40·8	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - -	5	1·2	1	·2	—	—
Dyspepsia - - - -	246	61·9	1	·2	—	—
Dysentery - - - -	6	1·5	3	·7	—	—
Diarrhœa - - - -	264	66·4	1	·2	—	—
Colic and Constipation - -	29	7·3	—	—	—	—
Hæmorrhoids - - - -	8	2·	—	—	—	—
Worms - - - -	25	6·2	—	—	—	—
Other Diseases of Stomach, Intestines, &c. - - -	4	1·	1	·2	2	·5
Diseases of the Liver, &c. -	21	5·2	2	·5	—	—
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	11	2·7	4	1·	—	—
Diseases of the Bladder - -	3	·7	—	—	—	—
Gonorrhœa - - - -	103	25·9	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems—<i>contd.</i>						
Diseases of the Organs of Generation - - - -	1	·2	2	·5	—	—
Stricture - - - -	16	4·	1	·2	—	—
Varicocele - - - -	8	2·	2	·5	—	—
Orchitis - - - -	46	11·5	2	·5	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c. - - - -	22	5·5	9	2·2	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	1,314	330·9	4	1·	1	·2
Ulcer - - - -	315	79·3	3	·7	—	—
Erythema - - - -	2	·5	—	—	—	—
Diseases of the Skin - -	43	10·8	2	·5	—	—
Scabies - - - -	2	·5	—	—	—	—
Unclassed:						
Debility - - - -	61	15·3	30	7·5	—	—
Non-descent of Testis - -	—	—	1	·2	—	—
Delirium Tremens - - -	4	1·	—	—	—	—
Poisoning - - - -	2	·5	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	1,315	331·2	4	1·	4	1·
Burns and Scalds - - -	70	17·6	—	—	9	2·2
Submersion and Drowning -	10	2·5	—	—	2	·5
Suicide - - - -	—	—	—	—	—	—
TOTALS - - -	5,669	1,427·9	167	39·5	32	8·

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-pox - - - -	-	15	15	—	—
Measles - - - -	84	447	531	1.4	.3
Typhus Fever - - -	61	69	130	.3	—
Enteric Fever - - -	75	309	384	1.	.2
Simple continued Fever -	1,665	1,678	3,343	9.1	2.2
Ague - - - -	525	17	542	1.4	.3
Remittent Fever - - -	511	287	798	2.1	.5
Mumps - - - -	2	-	2	—	—
Influenza - - - -	1,434	755	2,189	5.9	1.4
Erysipelas - - - -	371	431	802	2.1	.5
II. General Diseases, Section B.:					
Rheumatism - - - -	2,881	1,860	4,741	12.9	3.2
Gout - - - -	65	42	107	.2	—
Syphilis - {Primary - - -	3,387	1,896	5,283	14.4	3.6
{Secondary - - -	733	551	1,284	3.5	.8
Scrofula - - - -	108	-	168	.2	—
Phthisis Pulmonalis - -	349	593	942	2.5	.6
Dropsy - - - -	4	-	4	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Sunstroke - - - -	167	-	167	.4	.1
Paralysis - - - -	24	-	24	—	—
Vertigo - - - -	17	-	17	—	—
Epilepsy - - - -	59	33	92	.2	—
Neuralgia - - - -	69	-	69	.1	—
Diseases of the Brain - -	32	-	32	—	—
Diseases of the Eye - -	300	164	464	1.2	.3
Diseases of the Ear - -	99	76	175	.4	.1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System :					
Diseases of the Heart - { Functional -	166	224	390	1·	·2
- { Organic -	173	127	300	·8	·2
Aneurism - - - -	79	-	79	·2	—
Varicose Veins - - -	95	12	107	·2	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - -	338	158	496	1·3	·3
Glandular Diseases - -	24	-	24	—	—
VII. Diseases of the Respiratory System :					
Diseases of the Larynx - -	222	92	314	·8	·2
Catarrh - - - -	2,355	63	2,418	6·6	1·6
Hæmoptysis - - - -	36	38	74	·2	—
Asthma - - - -	6	-	6	—	—
Other Diseases of the Lungs -	630	985	1,615	4·4	1·1
VIII. Diseases of the Digestive System :					
Cynanche - - - -	1,070	89	1,159	3·1	·7
Diseases of the Mouth, Teeth, &c. - - - -	18	-	18	—	—
Dyspepsia - - - -	1,133	207	1,340	3·6	·9
Dysentery - - - -	207	93	300	·8	·2
Diarrhoea - - - -	1,091	44	1,135	3·1	·7
Colic and Constipation - -	107	80	187	·5	·1
Hæmorrhoids - - - -	100	86	186	·5	·1
Worms - - - -	77	-	77	·2	--
Other Diseases of the Stomach, Intestines, &c. - - -	55	240	295	·8	·2
Diseases of the Liver, &c. -	221	154	375	1·	·2
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys, &c. -	133	135	268	·7	·1
Diseases of the Bladder - -	16	78	94	·2	—
Gonorrhoea - - - -	1,711	303	2,014	5·5	1·3

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems—<i>contd.</i>					
Diseases of the Organs of Generation - - - -	2	81	83	·2	—
Stricture - - - -	160	605	765	2·	·5
Varicocoele - - - -	109	-	109	·2	—
Orchitis - - - -	671	744	1,415	3·8	·9
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - -	359	460	819	2·2	·6
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	12,456	820	13,276	36·3	9·1
Ulcer - - - -	4,938	1,008	5,946	16·2	4·
Erythema - - - -	51	-	51	1·	—
Diseases of the Skin - -	649	12	661	1·8	·4
Scabies - - - -	14	-	14	—	—
Unclassed:					
Debility - - - -	460	1,044	1,504	4·1	1·
Non-descent of Testis - -	32	-	32	—	—
Delirium Tremens - - -	43	-	43	·1	—
Poisoning - - - -	11	-	11	—	—
Wounds and Injuries:					
Wounds and Injuries, &c. -	13,869	2,121	15,990	43·8	11·
Burns and Scalds - - -	724	-	724	1·9	·4
TOTALS - - -	57,633	19,326	76,959	210·8	53·

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship on the MEDITERRANEAN STATION.

CAUSE or INVALIDING.	Antelope.	Caledonia, 1st Commission.	Caledonia, 2nd Commission.	Cruiser.	Endymion.	Enterprise.	Hibernia.	Jasour.	Lord Warden.	Newport.	Prince Consort.	Rapid.	Royal Oak.	TOTAL.
I. General Diseases, Section A.:														
Ague - - - -	-	-	1	-	-	-	1	-	-	4	-	-	-	6
Remittent Fever - - -	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Influenza - - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	1
II. General Diseases, Section B.:														
Rheumatism - - -	1	-	4	1	1	-	-	2	1	-	3	-	4	17
Syphilis { Primary - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	1
{ Secondary - - -	-	-	3	-	-	-	-	-	-	-	1	-	3	7
Scrofula - - - -	-	-	-	-	-	-	1	-	-	-	-	-	1	2
Phthisis - - - -	-	1	4	2	1	2	-	-	5	-	2	-	3	20
Diabetes - - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Dropsy - - - -	-	-	-	-	-	-	-	-	-	-	-	-	1	1
III. Diseases of the Nervous System and Organs of the Special Senses:														
Paralysis - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Epilepsy - - - -	-	1	-	-	-	-	-	-	1	-	1	-	-	3
Insanity - - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Disease of the Brain, &c. -	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Diseases of the Eye - -	-	-	-	1	-	-	-	-	2	-	-	-	1	4
IV. Diseases of the Circulatory System:														
Disease of the { Functional -	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Heart - { Organic -	-	-	2	-	-	-	-	-	2	-	-	-	-	4
Varicose Veins - - -	-	-	1	-	-	-	-	-	-	-	1	-	1	3
VII. Diseases of the Respira- tory System:														
Diseases of the Larynx -	-	1	-	-	-	-	-	-	-	-	1	-	-	2
Hemoptysis - - - -	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Other Diseases of the Lungs	-	-	1	-	-	-	-	-	3	-	-	-	2	6

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued.*

CAUSE OF INVALIDING.	Antelope.	Caledonia, 1st Commission.	Caledonia, 2nd Commission.	Cruiser.	Eudymion.	Enterprise.	Hibernia.	Jasour.	Lord Warden.	Newport.	Prince Consort.	Rapid.	Royal Oak.	TOTAL.
VIII. Diseases of the Digestive System :														
Diseases of the Mouth, &c.	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Dyspepsia - - - -	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Dysentery - - - -	-	1	-	-	-	-	-	-	-	1	1	-	-	3
Diarrhœa - - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Other Diseases of the Stomach, &c. - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Diseases of the Liver, &c. -	-	-	-	-	-	-	-	-	2	-	-	-	-	2
IX. & X. Diseases of the Urinary and Generative Systems :														
Diseases of the Kidneys -	-	-	-	-	-	-	-	-	63	-	1	-	-	4
Diseases of the Organs of Generation - - - -	-	-	-	-	-	-	-	-	2	-	-	-	-	2
Stricture - - - -	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Varicocele - - - -	-	-	-	-	-	-	-	-	-	-	2	-	-	2
Orchitis - - - -	-	-	-	-	-	-	-	-	1	-	1	-	-	2
XI. Diseases of the Organs of Locomotion :														
Diseases of Bones, Joints, &c.	1	-	-	1	-	-	-	-	3	-	3	-	1	9
XII. & XIII. Diseases of Cellular Tissue and Cutaneous System :														
Phlegmon and Abscess -	-	1	-	1	-	-	-	-	-	-	1	-	1	4
Ulcer - - - -	-	-	-	-	2	-	-	-	-	1	-	-	-	3
Other Diseases of Skin -	-	-	1	-	-	1	-	-	-	-	-	-	-	2
Unclassed :														
Debility - - - -	-	-	16	-	-	2	-	-	63	-	3	2	4	30
Non-descent of Testis -	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Wounds and Injuries :														
Wounds - - - -	-	1	-	-	-	-	1	-	-	-	2	-	-	4
TOTAL - - -	2	6	36	7	4	6	4	3	31	6	27	2	23	157

(a) Spinal column.

(b) Including 1 in Skylark.

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the
MEDITERRANEAN STATION.

CAUSE OF DEATH.	Caledonia (First Commission).	Caledonia (Second Commission).	Cruiser.	Endymion.	Hibernia.	Lord Warden.	Newport.	Prince Consort.	Royal Oak.	TOTAL.
I. General Diseases, Section A.:										
Enteric Fever - - -	-	-	2	-	-	-	1	-	-	3
II. General Diseases, Section B.:										
Phthisis - - - -	-	-	-	-	-	1	-	1	2	4
III. Diseases of the Nervous System and Organs of Special Senses:										
Diseases of the Brain, &c. -	-	-	-	-	1	-	-	-	-	1
IV. Diseases of the Circulatory System:										
Heart Disease, Organic -	1	-	-	-	-	-	-	1	-	2
VII. Diseases of the Respira- tory System:										
Other Diseases of the Lungs	-	1	-	-	-	1	-	-	2	4
VIII. Diseases of the Digestive System:										
Diseases of the Stomach, &c.	-	-	1	-	-	-	-	1	-	2
XII. & XIII. Diseases of the Cellular Tissue and Cu- taneous System:										
Phlegmon and Abscess -	1	-	-	-	-	-	-	-	-	1
Wounds and Injuries:										
Wounds - - - -	-	1	-	-	-	2	-	1	-	4
Submersion and Drowning -	-	-	-	1	-	-	8	-	-	9
Suicide - - - -	-	1	-	-	-	1	-	-	-	2
TOTAL - - -	2	3	3	1	1	5	9	4	4	32

TABLE, No. 5 - - - - -
 SHOWING the Number of CASES of all DISEASES and INJURIES - - -

DISEASE or INJURY.	Antelope.	Caledonia (First Com- mission).	Caledonia (Second Commission)	Caradoc.	Cochetara.	Cruiser.
I. General Diseases, Section A.:						
Measles - - - - -	-	4	-	-	-	-
Typhus Fever - - - - -	-	-	3	-	-	2
Enteric Fever - - - - -	-	3	22	-	11	4
Simple Continued Fever - - - - -	-	1	-	-	19	-
Ague - - - - -	8	-	-	-	10	-
Remittent Fever - - - - -	4	-	-	-	-	-
Influenza - - - - -	-	-	198	-	-	-
Mumps - - - - -	-	-	-	-	-	-
Erysipelas - - - - -	-	-	18	1	-	-
II. General Diseases, Section B.:						
Rheumatism - - - - -	4	22	18	5	3	7
Gout - - - - -	-	-	2	-	-	-
Syphilis { Primary - - - - -	4	3	15	-	4	7
{ Secondary - - - - -	-	1	12	-	-	-
Scrofula - - - - -	-	-	-	-	-	-
Phthisis Pulmonalis - - - - -	-	3	-	-	-	1
Dropsy - - - - -	-	-	-	-	-	-
III. Diseases of the Nervous Sys- tem and Organs of the Special Senses:						
Stroke - - - - -	-	-	3	-	-	-
Paralysis - - - - -	-	-	-	-	-	1
Vertigo - - - - -	-	-	-	-	-	-
Epilepsy - - - - -	-	3	-	-	-	1
Neuralgia - - - - -	-	-	2	-	1	1
Diseases of the Eye - - - - -	-	1	2	3	-	-
Diseases of the Ear - - - - -	4	-	-	-	-	1
IV. Diseases of the Circulatory System:						
Disease of the { Functional - - - - -	-	-	-	-	-	-
{ Organic - - - - -	-	-	2	-	-	-
Aneurism - - - - -	-	1	-	-	-	-
Varicose Veins - - - - -	-	-	1	-	-	-
V. & VI. Diseases of the Ab- sorbent System and Duct- less Glands:						
Bubo (Symp.) - - - - -	-	-	3	-	-	1
Glandular Diseases - - - - -	-	-	-	-	-	-
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - - - - -	-	-	27	1	-	-
Catarrh - - - - -	15	62	4	1	16	27
Hæmoptysis - - - - -	-	-	-	-	-	-
Asthma - - - - -	-	-	-	-	-	-
Other Diseases of Lungs - - - - -	1	3	4	1	-	2

TABLE, No. 5.
in the Ships employed on the MEDITERRANEAN Station.

Endymion.	Enterprise.	Hibernia.	Jasour.	Lee.	Lord Warden.	Newport.	Prince Consort.	Psyche.	Rapid.	Royal Oak.	Trinculo.	Wizard.	Total.
-	-	-	-	-	1	-	-	-	1	14	-	-	20
-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	3	-	-	-	-	-	-	8
2	1	1	4	2	35	7	9	2	36	2	-	2	143
2	-	4	1	-	-	15	-	1	-	6	-	2	51
3	-	-	-	-	-	-	-	-	-	-	-	-	25
-	-	-	-	-	-	-	-	-	-	-	-	-	198
-	-	-	-	-	1	-	-	-	1	7	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	27
9	11	17	7	2	35	7	28	7	17	50	-	5	254
-	-	-	-	-	-	-	-	-	-	-	-	-	2
17	14	5	4	2	18	2	23	1	1	30	3	-	153
1	3	-	-	-	3	-	4	-	-	11	-	-	39
-	1	3	-	-	-	-	-	-	-	1	-	-	5
-	2	-	-	-	5	-	3	-	1	2	-	-	18
-	-	-	-	-	-	-	-	-	2	-	-	-	2
-	-	-	-	-	-	-	-	2	-	-	-	-	5
-	-	1	-	-	-	-	-	2	-	1	-	-	3
-	-	1	-	-	-	-	-	-	1	-	-	-	4
-	-	1	-	-	1	-	2	-	-	-	-	-	8
-	1	2	1	1	4	4	1	2	-	-	-	2	10
1	-	1	-	-	-	-	2	1	4	3	-	-	29
-	-	-	-	-	-	-	-	2	3	3	-	-	15
-	-	-	-	-	3	-	-	3	-	-	1	-	7
1	-	-	-	-	1	-	1	-	1	-	-	-	6
-	-	-	-	-	-	-	1	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	2
-	1	-	1	1	4	-	6	2	-	1	-	-	20
-	-	-	-	-	-	-	-	-	1	-	-	-	1
-	-	-	-	1	-	-	1	-	1	-	-	-	31
9	22	7	14	7	53	8	50	14	12	25	11	18	425
-	-	-	-	-	-	-	-	-	-	1	-	-	1
-	-	-	-	-	1	-	-	-	-	-	-	-	1
-	-	-	-	1	8	-	4	-	-	9	-	2	35

TABLE, No. 5.—Showing the Number of Cases of all Diseases and Injuries

DISEASE or INJURY.	Antelope.	Caledonia (First Com- mission).	Caledonia (Second Commission).	Caraduc.	Cockatrice.	Cruiser.
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	10	2	-	-	-	7
Diseases of Mouth, Teeth, &c.	-	-	-	-	-	-
Dyspepsia - - - - -	1	9	71	2	5	7
Dysentery - - - - -	-	-	1	-	-	-
Diarrhoea - - - - -	13	11	62	1	13	8
Colic and Constipation - -	1	-	4	1	2	1
Hæmorrhoids - - - - -	1	1	-	-	1	1
Worms - - - - -	10	1	-	-	-	-
Diseases of Stomach, Intes- tines, &c. - - - - -	-	-	-	-	-	1
Diseases of the Liver, Spleen, &c.	-	1	1	1	1	1
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	-	1	-	-	-	-
Diseases of the Bladder - -	-	-	1	-	-	-
Gonorrhœa - - - - -	7	2	9	-	3	16
Diseases of the Organs of Ge- neration - - - - -	-	-	-	-	-	-
Stricture - - - - -	-	-	3	-	-	1
Variocoele - - - - -	-	-	-	-	-	-
Orchitis - - - - -	1	5	7	-	-	2
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones - - -	2	-	1	-	-	-
Diseases of the Joints - - -	-	-	-	-	1	-
Diseases of the Bursæ - - -	-	-	2	-	1	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - - -	24	86	211	5	3	35
Ulcer - - - - -	2	9	31	2	1	6
Erythema - - - - -	-	-	-	-	-	-
Diseases of the Skin - - -	1	1	14	-	1	1
Scabies - - - - -	-	-	-	-	-	-
Unclassed:						
Debility - - - - -	-	-	25	-	-	1
Delirium Tremens - - - -	-	-	-	-	-	-
Poisoning - - - - -	-	-	-	-	-	-
Wounds and Injuries:						
Wounds, &c. - - - - -	54	74	213	5	9	33
Burns and Scalds - - - -	1	3	10	1	1	-
Submersion and Drowning -	-	-	1	-	-	-
TOTAL - - - - -	168	313	1,053	50	106	181

in the Ships employed on the Mediterranean Station—*continued*.

Endymion.	Enterprise.	Hibernia.	Jaseur.	Lee.	Lord Warden.	Newport.	Prince Consort.	Psyche.	Rapid.	Royal Oak.	Trinculo.	Wizard.	TOTAL.
5	3	7	-	3	35	4	30	5	7	44	-	-	162
-	-	-	-	-	-	-	1	4	-	-	-	-	5
4	4	2	-	4	19	3	17	11	17	70	-	-	246
-	-	3	-	-	-	-	-	1	1	-	-	-	6
1	5	7	5	11	30	11	15	3	10	44	-	14	264
2	1	-	1	2	1	-	5	4	1	3	-	-	29
-	1	-	1	-	1	-	1	-	-	-	-	-	8
-	-	-	-	6	-	-	1	-	5	2	-	-	25
-	-	-	-	-	1	-	1	-	1	-	-	-	4
-	2	1	-	-	2	1	7	1	1	1	-	-	21
-	1	-	-	-	1	1	1	3	1	2	-	-	11
-	-	-	-	-	1	1	-	-	-	-	-	-	3
3	16	1	3	5	6	-	3	3	7	16	3	-	103
-	-	-	-	-	1	-	-	-	-	-	-	-	1
1	2	-	-	2	2	2	5	-	-	-	-	-	16
-	-	-	1	2	-	-	5	-	-	-	-	-	8
1	2	-	-	-	13	1	5	-	-	7	-	2	46
-	-	-	-	-	3	-	-	-	1	1	-	-	8
-	-	-	-	-	1	-	2	-	-	3	-	-	7
-	-	-	-	-	1	-	3	-	-	-	-	-	7
28	25	24	6	12	231	33	227	20	98	217	17	12	1,314
12	12	7	-	4	38	16	50	-	15	90	2	9	315
-	-	1	-	-	1	-	-	-	-	-	-	-	2
-	3	2	-	-	5	4	3	-	3	4	1	-	43
-	-	1	-	-	-	-	-	-	-	1	-	-	2
1	1	3	-	1	11	2	2	2	3	7	2	-	61
1	-	1	-	-	-	-	-	-	-	2	-	-	4
-	(a) 1	-	(b) 1	-	-	-	-	-	-	-	-	-	2
27	30	20	9	9	209	22	245	25	63	209	19	5	1,315
2	-	3	4	1	11	3	11	-	4	15	-	-	70
1	-	3	-	-	-	5	-	-	-	-	-	-	10
124	167	133	63	78	827	155	775	121	320	913	59	73	5,669

(a) By land.

(b) By alcohol.

TABLE, No. 6. - - - - -

SHOWING the Names of the SHIPS; the Average Complements, &c.; the Number of Men Sick Daily, in each Ship;

P. O. Paid off.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.
Iron Clad - -	Caledonia - - P. O.	Devonport -	27 April 1865	30	4,125	S. 1,000
	Caledonia - - C.	Malta -	1 June 1869	30	4,125	S. 1,000
	Enterprise - - -	Malta -	1 July 1868	4	993	S. 160
	Lord Warden - - -	Devonport -	31 July 1867	19	4,080	S. 1,000
	Prince Consort - - -	Devonport -	2 April 1868	24	4,045	S. 1,000
	Royal Oak - - -	Portsmouth	14 Dec. 1867	24	4,086	S. 600
Fourth Rate -	Endymion - - P. O.	Sheerness -	27 Sept. 1866	21	2,486	S. 500
Sloop - -	Cruiser - - - -	Portsmouth	27 July 1866	3	752	S. 60
	Rapid - - - -	Woolwich -	14 May 1868	3	672	S. 150
Gun Vessel - -	Jaseur - - - -	Sheerness -	26 Aug. 1867	5	427	S. 80
	Lee - - - -	Sheerness -	10 June 1867	5	431	S. 80
Steam Vessel - (Surveying)	Antelope - - - -	Woolwich -	12 July 1866	3	650	P. 260
	Caradoc - - P. O.	Woolwich -	21 Feb. 1867	2	676	P. 350
	Newport - - - -	Devonport -	3 April 1868	5	425	S. 80
	Psyche - - - -	Malta -	1 Jan. 1867	2	835	P. 250
Gun Boat - -	Cocatrice - - - -	Malta -	9 Feb. 1866	2	269	S. 60
	Trinculo - - - -	Portsmouth	- Mar. 1867	2	273	S. 60
	Wizard - - - -	Malta -	27 Mar. 1866	2	270	S. 60
Receiving Ship -	Hibernia - - - -	Malta -	2 April 1867	-	2,530	-

- - - - - TABLE, No. 6.

Cases; the Total Number of Days' Sickness on Board; the Average Number of and the Number Discharged to Hospital.

C. Commissioned.

Period.	Average Complements.	Average Complements corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
1 Jan. to 31 May	690	290	313	3,294	9·	31·	8
1 June to 31 Dec.	635	370	1,053	10,459	28·6	77·2	106
Year - -	145	145	167	2,213	6·	41·3	1
Year - -	680	680	827	7,829	21·4	31·4	66
Year - -	660	660	775	8,501	24·1	36·5	27
Year - -	680	680	913	9,940	27·2	40·	50
1 Jan. to 21 May	515	200	134	1,608	4·4	22·	6
Year - -	185	185	181	2,072	5·6	30·2	15
Year - -	135	135	320	3,182	8·7	64·4	13
1 Oct. to 31 Dec.	70	20	63	484	1·3	65·	4
1 July to 31 Dec.	65	30	78	415	1·1	36·6	6
Year - -	90	90	168	1,916	5·2	57·7	5
1 Jan. to 9 June -	65	30	30	235	·6	20·	3
Year - -	80	80	155	1,250	3·4	42·5	8
Year - -	70	70	121	798	2·1	30·	2
Year - -	50	50	106	592	1·6	32·	2
Year - -	45	45	59	592	1·6	35·5	-
Year - -	45	45	73	662	1·8	40·	1
Year - -	165	165	133	1,341	3·6	21·8	3

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THE squadron on the North American and West Indian Station in the year 1869 comprised seventeen vessels; viz., four iron-clads; two fourth-rates; two sixth-rates; four sloops; three gun-vessels; one receiving ship permanently stationed at Port Royal, Jamaica; and one floating battery permanently stationed at Bermuda. The returns from eleven of the vessels were for the whole year, and from the remainder for periods varying from four to nine months. The mean force corrected for time was 3,500, and the total number of cases of disease and injury entered on the sick-list 5,210, which is in the ratio of 1488.5 per 1,000 of force, being an increase, compared with the preceding year, equal to 62.2 per 1,000. Of these 120 were invalided, and eighty-two proved fatal, the former being in the ratio of 34.2, and the latter of 23.4 per 1,000. Compared with the previous year there was a reduction to the extent of 4.6 per 1,000 in the invaliding-rate, but an increase in the ratio of mortality equal to 14.2 per 1,000, an increase altogether attributable to the prevalence of yellow fever at Jamaica and elsewhere.

The average daily loss of service from General Diseases, Section A., or Febrile Group, was in the ratio of 5.9 per 1,000; from Section B., or Constitutional Group, 9.7; from diseases of the nervous system and organs of the special senses, .9; of the circulatory system, .6; of the absorbent system and ductless glands, .9; of the respiratory system, 3.3; of the digestive system, 2.4; of the urinary and generative system, 2.5; of the organs of locomotion, .2; of the cellular and cutaneous systems, 11.5; from unclassified diseases, 1.2; and from wounds and injuries of various kinds, 8.6. The average number of men sick daily was 180.7, which is in the ratio of 51.6 per 1,000, being a reduction, compared with the preceding year, equal to 5.4 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

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Under this head 683 cases of various forms of disease were entered on the sick-list, of which four were invalided, and fifty-seven proved fatal. Of the deaths one was from small-pox; four were from continued fever; forty-eight from yellow fever; two from remittent fever; and two from pyæmia.

Small-pox.—The only case of small-pox which occurred in the squadron was in the person of a serjeant of marines of the Defence, and it occurred at Lisbon before the ship had reached the station. On

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On the 6th of April this man had slept in a house in Lisbon; he felt unwell on the following night, and was entered on the sick-list on the 8th with well-marked febrile symptoms. He was immediately discharged to the Naval Hospital, where the specific form of the disease rapidly developed itself; the eruption became confluent and hæmorrhagic, and he died on the evening of the 12th day from that on which he had slept on shore. He stated that he had been vaccinated, but there was no appearance of a cicatrice on either arm.

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Simple Continued Fever.—There were 511 cases entered under this head, of which three were invalided and four proved fatal. The average duration of each case was between nine and ten days. The vessels in which the greatest number of cases occurred were the Aboukir, the Philomel, the Terror, and the Vestal.

In the Aboukir there were 301 cases classed as simple continued fever, several of which, however, afterwards proved to be cases of specific yellow fever. Of the total number of cases 119 were sent to hospital, and of this number only eighty-four were admitted by the Deputy Inspector General* to be of the simple character imputed to them, the remainder being entered under the head of specific yellow fever. Of the eighty-four cases admitted to hospital, the Deputy Inspector General observes: "The majority of these cases were characterised by a high temperature of body, headache, quick and full pulse, general malaise, and disturbance of the digestive organs. They ran a course varying from twenty-four, thirty-six, forty-eight, to seventy-two hours, and owed their origin to fatigue and exposure to a tropical sun. The subjects of these cases were in a condition similar, though in an exaggerated degree, to that of men who having undergone great bodily fatigue from hard work and exposure had exhausted their physical powers, and who, though not what is termed ill, stood in need of sleep, food, and drink, to be restored to their former vigour.

As several of these men came under treatment at the same time, as they had undergone similar fatigue and exposure, were all about the same age, and presented similar symptoms, different modes of treatment were adopted according to the degree of severity of the symptoms. In the severer cases the bisulphites were administered, in others quinine, in a third class simple salines, whilst in those where the indication for rest was evident, simple diluents were also given, whilst sleep and rest were encouraged. The result was the same; the fever ran its course according to its severity, and was not influenced whether for evil or for good by the medicines exhibited.

In the history of these cases no paludal nor other poison had been at work. At the time when these men were exposed the sun shone bright in the heavens, the sky was unclouded, the temperature in the shade was 88° Fahrenheit, and a south-easterly wind was blowing. The wind had passed over the Caribbean Sea, and over the sandy soil upon which Port Royal stands, before it had reached
these

* Deputy Inspector General J. L. Donnet, M.D.

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these men, and consequently could not have been impregnated with any malarious influence. The causes which produced these fevers are to be met with in other parts of the world and are not peculiar to Port Royal; and in their action will produce similar results, influenced in some measure by the powers of resistance or the amount of vital force which the constitution may chance to possess at the time of its subjection to their influence."

There were thirty-nine cases of simple continued fever in the *Philomel*, but little information is given in connection with them. The average duration of each case was between eight and nine days.

Little or no information is given in connection with the cases of simple continued fever occurring in the *Terror* and *Vestal*.

Yellow Fever.—One hundred cases of this deadly form of fever were entered on the sick-list during the year, and of these, forty-eight proved fatal. This is more than double the average ratio of mortality of the disease, and is accounted for by the fact that many cases of what have been returned as simple continued fever were doubtless cases of the more fatal type.

The vessels of the squadron in which yellow fever appeared were the *Aboukir*, the *Barracouta*, the *Defence*, the *Eclipse*, the *Favourite*, the *Jason*, the *Philomel*, the *Terror*, and the *Vestal*.

Only seventeen cases of yellow fever appear in the Return from the *Aboukir*, but, as has been previously observed in reference to the cases of simple continued fever in that vessel, there can be no question, indeed it is stated so by the medical officer of the ship, that many of them were undoubted cases of yellow fever. The medical officer* in charge of the ship during the first eight months of the year says:—"Although only one case of yellow fever appears on the Nosological Table, fourteen others sent to hospital from the ship, assumed the yellow fever type. These cases were in many instances sent to hospital on mere suspicion, and before the disease had become developed, and in other instances owing to the large number of fever cases they were sent to hospital for want of room or accommodation on board." Of the total number of cases of fever sent to hospital from this vessel during the year 1869, seven deaths resulted from specific yellow fever.

There were six cases of yellow fever in the *Barracouta*, of which four died. With reference to these cases, the surgeon† of the vessel makes the following observations:—"Five patients were under treatment for yellow fever in the month of July, four of whom were placed on the list on the passage between Jamaica and Bermuda, and while the ship was in quarantine at the latter place. Of these, two died on board, one recovered; the remaining two died in hospital. This form of complaint was not specially recognised until the

* Surgeon John Coogan.

† Surgeon R. C. Pasley Lawrenson.

the evening of the 12th of July, two days after leaving Port Royal, and would have escaped detection then, if a system of testing albumen in the urine of all the feverish cases had not been systematically adopted from the first. The nature of the disease in the early symptoms exhibited nothing to point out its true malignant type, as they more or less resembled those of the simple continued fever; but from the recent exposure the ship had been subjected to at Havana and Port Royal, there was great fear that the yellow fever poison was latent in the Barracouta.

"The dates of the ship's movements prior, during, and subsequent to the epidemic on board were at Havana from the 19th of June to the 1st of July; at Port Royal, Jamaica, from the 6th of July to the 10th; at sea from the 10th to the 17th; at Bermuda from the 17th of July to the 28th; arrived at Halifax on the 2nd of August. While the ship remained at Havana—twelve days—the disease was prevalent on shore, and particularly amongst the shipping. The Spanish officer of health allowed us free pratique, and stated that the port was healthy, but in a few days I became accidentally cognisant of the risk we were being exposed to, although the sickness was on the decline. We were then the only English man-of-war in the harbour, and upon making my commanding officer acquainted with the great danger we were in by remaining in the place, I was informed that our presence was required to watch British interests until we should be relieved by some other vessel. Under these circumstances, it became a paramount duty to take every precaution of guarding against communication between the other ships and us, and prevent any of our people from landing except when absolutely requisite.

"As medical officer of the ship, with great responsibility, I cannot avoid saying that it was at least unfair to leave me in ignorance of the unhealthy condition of Havana at that time. Our authorities must have been aware of the state of the public health, and whoever the charge may fall upon, some might consider them morally responsible, though perhaps inadvertently, to some extent for the loss inflicted upon the public service in this ship, and subsequently through us upon the naval portion of the community at Bermuda.

"It was during a visit to the Military Hospital at Havana, on the 26th of June, that I became acquainted for the first time with the appearance of the disease in all its stages, Dr. R. H. Pozzio, the principal in charge of that establishment, from whom I gained much valuable information, and who had several cases under his care at the time, informed me of the extent to which the "vomito prieto" was prevailing. Knowing, however, the great danger run by exposing myself to the risk of contagion, the hospital being then free from infection, I deemed it prudent not to submit myself again to either chance of communicating the disease to the ship's company. Upon this account I resolved to refrain from visiting any of the hospitals, but indirectly became informed of the general form of treatment pursued by the Spanish physicians. At the same time I instituted a strict watch upon the health of the ship by suggesting all the sanitary precautions that common sense could

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could dictate; non-exposure of the men to the sun or rain; free ventilation throughout the vessel by wind-sails; daily removal of the bilge accumulations; besides a constant and liberal supply of carbolic acid solution wherever its action was required.

"If our immunity from yellow fever while we remained at Havana depended upon these measures, it can only amount to negative evidence, yet it would be scarcely logical to infer that we should have enjoyed the same freedom from sickness if our people had carried on the common daily routine of a man-of-war, and been granted the usual leave privileges. No cases of fever in any form had been under treatment while the ship was at Havana, yet all the foreign men-of-war, and a great portion of the merchant shipping, had more or less suffered. The great saving clause in our case depended upon the prevalence of the northerly winds at that time, which blow in from seawards, a matter of great import, as the health of the community bears a direct ratio to the wind's direction, the land breeze having a marked influence in raising the rate of sickness as it passes over a city specially located to more than predispose, if not to generate all the varieties of malarious poisons, from its low, marshy situation, defective sewerage, and remarkable apathy on the part of the population to pay attention to the principles of hygiene. The usual condition of the public health at Havana cannot be better stated than by quoting the pertinent remarks of Dr. J. J. Cornilliac, in his "Researches on the Origin and Propagation of Yellow Fever in the Antilles: "Chaque année, de Mai à Octobre, il y a la fièvre jaune à la Havane La Havane seule jouit ce funeste "privilège de conserver constamment le fléau dans son sein."

"Having left Havana on the 1st of July, the ship arrived at Port Royal, Jamaica, on the 6th, between which dates three cases of simple continued fever were under treatment. While at the latter port these cases became convalescent, and no additional cases were entered until the 11th, when two of the ship's company were attacked with the primary symptoms of yellow fever; one died in five days, the other becoming convalescent. On the 13th a petty officer was placed on the list for the same complaint, and died on the 16th. On the 16th the chief engineer was brought under observation, discharged to Bermuda Hospital on the 18th, where he died two days afterwards with the worst symptoms. Upon our arrival at Bermuda the ship was placed in quarantine for twenty-one days, but a fresh case having occurred on the 26th, ten days subsequent to the last one, she was ordered to Halifax. The sick re-embarked and again discharged to hospital on the 2nd of August.

As the clinical statement of each patient's case is fully entered in the journal, only a few remarks will be made on the history of the disease.

The febrile symptoms were generally ushered in by chills, and although the patients usually presented themselves for treatment in the mornings, the premonitory signs of sickness seemed frequently to have set in during the night, the patients invariably stating that they had been in perfect health previously. When the cases came under observation they presented nothing to distinguish them from the common type of simple continued fever, so that no attempt at classification

classification could be made until the evidence of the malignant form was established by the violence of febrile reaction, and the pathognomic sign of albuminous urine. The complaint may be divided into three stages; *1st stage*, lasting about twelve hours, frontal headache, rachialgia, eyes suffused, puffiness of lower lids; face expressive of great anxiety, skin hot, pungent; tongue moist, whitish; pulse full, hard, quick, ranging sometimes to 120; axillary temperature increased from two to four degrees; sometimes vomiting, generally nausea; diarrhoea was troublesome in one case; and in every instance there existed anorexia, thirst, drowsiness, but no sleep. *2nd stage*, from twelve to twenty-four hours, abatement of the acute symptoms with more listlessness. *3rd stage*, from two to seven days, ardent febrile reaction, which may terminate in convalescence or death either more or less rapidly. Albumen was not observed in the urine before the second day, and was noticed to increase in quantity with the tendency to death; the gastric symptoms setting in about the same time.

Knowing the insidious character of this formidable disease in its invasion, and being in daily expectation of its attack, I resolved to meet it chiefly by precautionary measures, upon sanitary principles. To some extent, as already mentioned, this plan had been carried out since the ship was at Havana. As cases of simple continued fever had been under treatment at the time, and prior to those of the yellow type, I was suspicious of the malignant febrile poison being latent in the ship. Accordingly I put into practice a system of surveillance without creating alarm, by keeping a strict and constant watch on the lower deck for any premonitory signs of sickness among the men. All feverish cases were carefully isolated and screened off in ample clear space on the upper deck; a staff of well-selected nurses and attendants was chosen, and upon the least symptoms of malignancy appearing, still further segregation was enforced by removing the patient to a place still further to leeward, with special attendants. All evacuations were speedily thrown overboard, also the foul clothing and articles of bedding, &c. used by the yellow fever patients, whether convalescent or dead. Carbolic acid solutions were freely and extensively employed where the necessity of its action was required.

The treatment, medicinally, depended more upon general principles than any specific method, as continually symptoms of a perplexing nature would arise, referable either to the head, digestive system, liver or kidneys, that required some special remedial measure. To some extent the administration of medicine commenced by giving an emetic, ipecacuanha, followed by a calomel, saline, or castor oil purge, according to the circumstances of the case. The urgent symptoms generally subsided after the alimentary canal had been well opened. Diaphoretics in small doses, avoiding antimony, as it produces gastric irritation, assisted by wet warm blanket-packing, seemed to give relief by inducing perspiration, but the beneficial effects soon passed off. Quinine was at first administered in large doses, but as it was observed to mask the head symptoms, and produce no good result, its use was discontinued except in con-

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valescent cases, when it was given combined with iron. Effervescing draughts and local sinapisms were employed to combat the gastric irritability, and prepare the stomach for the assimilation of food. In addition, recourse was had to some of the remedies recommended by various authorities, sodæ hyposulph., potassæ chlorat., and the tinct. ferri perchlorid; but all medicinal agents seemed more or less empirical. Much greater value seemed, in my opinion, to result from exhibiting a nourishing diet, ext. carnis, chicken soup, calf's-foot jelly given in small quantities, and combined with lime water and sodæ bicarb. The still and effervescing French wines, and brandy and water, were apparently borne with such good effect that I regretted not having used them early in the fever."

"The ship having special Admiralty orders to proceed to Bermuda for the purpose of assisting to take the Floating Dock into the harbour, may explain the reason of our not going north when it was discovered yellow fever had appeared on board; and as a quarantine establishment existed on the island, it was resolved by the commanding officer to have our cases disembarked, and wait there for further orders, instead of steaming to Halifax, as suggested by me directly I became aware of the specific malignant nature of the fever. Accordingly we were placed in quarantine for twenty-one days, as mentioned before; the sick being landed, and the list reduced to a cypher, we were congratulating ourselves that we should soon be granted free pratique; but, as already stated, a fresh case having occurred on the 26th of July, or nine days after our arrival at Bermuda, the civil authorities insisting upon the quick removal of the ship, we left next day for Halifax. Since then the health of the ship's company has been in so satisfactory a condition that any further remarks are not required upon this subject."

"The visits of this ship to two infected ports, Havana and Port Royal, in July, complicates the question as to when the fever was introduced on board. At first I was inclined to think it came from Havana, which would give it a period of ten days incubation for the first case, but now I am more disposed to credit Jamaica, if not with the whole responsibility, most certainly with a share. Although no leave was given to the ship's company, and we only remained four days, yet as the place was beginning to be very unhealthy, the disease could easily have been imported into the ship through a variety of channels, by the number of strangers, of whom we had a great influx, as the vessel was not expected to return to the island again. The chief engineer, who died on the 20th, or the fourth day of sickness, was every night on shore at Port Royal between the 6th and 10th of the month, and I should feel inclined to trace his illness to that place. The ship herself, I am induced to believe, was free from infection throughout, although the fact of the last case occurring on the 26th, or sixteen days after, may seem to indicate otherwise. Yet as he was a subject, from his chachectic constitution, susceptible to infection, he might have been only suffering from the simple continued type when sent to the quarantine island at Bermuda, and as that place was positively infected then, as appears from subsequent records, he was almost certain of imbibing the true malignant form.

"It

"It may be worth recording that all the men who suffered more or less from fever, of whatever variety, had their sleeping berths on the fore-troop deck, and, with one exception, on the starboard side, but their hammocks were wide apart, and they all belonged to different messes."

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This minute, yet concise and admirable report, speaks for itself, and obviates the necessity of making any remarks upon it. The culpable concealment of the prevalence of epidemic diseases in foreign ports by the local officials has frequently been alluded to in these reports. The only safeguard against this would be vigilance and prompt action on the part of our consular establishments when any of our men-of-war were signalled as approaching the harbour. Unhappily this does not appear to constitute any part of consular duties, and our vessels for the most part are first made acquainted with the existence and prevalence of infectious diseases by their sudden appearance amongst the ship's company.

Although twenty-nine cases only of yellow fever appear in the returns from the Defence, it is more than probable that many others existed, although not recognised, considering that seventeen cases proved fatal. Unfortunately the medical journal of the ship is perfectly valueless as regards this severe and fatal epidemic, and all that can be gathered from it is that the disease was contracted at Havana; that on the death of the first case the ship went to sea for two days and returned to Havana, from thence to Santiago de Cuba, where an officer died of the disease; from thence arrived at Port Royal, where several cases of yellow fever were taken to the hospital, "and more nearly every day to the end of the month." At Port Royal the vessel was by some extraordinary fatality kept until the 10th of August, when she went to San Domingo, and from thence to Halifax.

The Deputy Inspector General of the Naval Hospital at Port Royal makes the following remarks on the epidemic in the Defence:—"About this time (19th July) Her Majesty's ship Defence entered the harbour of Port Royal, having the infection of yellow fever on board. This vessel had left Port Royal on the 4th of June for the Havana, where she arrived on the 9th, and where she found yellow fever prevailing among the Spanish men-of-war and merchant shipping in the harbour. On the 27th of June, in the harbour of the Havana, the first case of yellow fever made its appearance on board the Defence, in the person of the commander's servant, which had a fatal termination on the 1st of July, the fifth day of the fever. On the 14th of July this vessel arrived at Port-au-Prince in the Republic of Haïti, in which place yellow fever likewise prevailed, and where it so raged as to have caused a high rate of mortality among the crew of his Imperial Majesty's corvette D'Estrees, the commander and several of the crew having fallen victims to it.

"Within a few days after the Defence's arrival in the harbour of Port Royal she sent several cases of yellow fever to this hospital; the type of which was of such severity as to have caused a mortality
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of 50 per cent. With these cases of yellow fever there were likewise several of simple continued fever, and as these occurred at the same time in men who had been subjected to similar influences, it became a question whether they were simply grades of one disease, attributable to the same cause, and only differing in symptoms from the amount of virus imbibed. And it did seem, *prima facie*, that there was some foundation for the acceptance of this theory, for in this instance, men had been subjected to the same influences, and had fallen ill about the same time, within a zone which is believed to be the habitat of yellow fever; and as some importance was attached to the theory that all diseases run into the reigning one, it was believed by those who raised the question, that both the yellow and the simple continued fever, were the result of the action of one and the same cause, only differing in type from the circumstance of constitution, of age, temperament, habits, and other contingencies.

"If these fevers had been known only in that part of the globe which is acknowledged to be the zone of yellow fever, and only there, the parallel which had been thus established between the simple continued and yellow fever might have been sustained, for at the outset, and during the first days the symptoms of both appeared analogous, and to all seeming identical. But the conclusion had only coincidence for its foundation, for though it did happen that the circumstances which attended this outbreak seemed to favour a belief in this theory, there was no warrant for the assumption that any necessary causative connection existed between them.

"The determining causes which produced one are essentially different from those which produce the other; the causes which originate simple continued fever are in existence all over the world, and are not of a specific nature, whereas those which generate yellow fever are limited to a geographical position, and are of a specific nature*"

Without questioning for one moment the facts that simple continued fever and yellow fever are neither the same thing nor due to the same causes, it may be observed that in all epidemics, cases which are unquestionably examples of the prevailing disease have been known to occur in so mild a form as to create considerable doubt as to their real character. This has been noted in epidemics of small-pox, scarlet fever, measles, cholera, and the like. And so with yellow fever, many cases which might be fairly considered attributable to the infection of the yellow fever poison have occurred during an epidemic in so mild a form as to lead to their being classed as cases of simple continued fever. The difficulty medical officers have experienced in classifying cases of febrile disease during an epidemic of a specific fever, has been frequently noticed in these reports, some having gone so far as to class those only as yellow fever which had a fatal termination.

There

* *Vide* "Statistical Report of the Health of the Navy, for the Year 1867," wherein proofs are adduced to show that Yellow Fever is a fever *sui generis*, distinct from other forms of fever.

There were nine cases of yellow fever in the Eclipse, of which one proved fatal. On Table IV. two deaths from this disease appear in connection with this ship, which is strictly correct, the other case being that of a boy who had been discharged in the month of April to Jamaica Hospital, for the treatment of scrofula. There he contracted the fever which carried him off.

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The outbreak in the Eclipse was attributable to exposure at Havana. The vessel had anchored there on the 26th of June, at which time yellow fever was very prevalent, and very fatal, in a Spanish man-of-war, and was spreading amongst the merchant shipping. On the 1st of July, in consequence of a death from this disease on board the Defence, and several men being attacked with febrile symptoms, the squadron left Havana, and the Eclipse, parting company with it, proceeded to Nassau. In consequence of there not being sufficient water in the harbour, the vessel was anchored close to the small island of Salt Cay. On the morning of reaching that anchorage a young officer, a sub-lieutenant, was placed on the sick-list with symptoms of fever. The Surgeon* says:—" . . . he had felt unwell from the day we left the Havana; had been a good deal out of the ship, visiting friends on shore, and no doubt exposed to the infection of fever." In the temporary absence of a ward-room officer he occupied the vacant cabin. The next person attacked was the navigating lieutenant, then the senior lieutenant, then one of the carpenter's crew, the paymaster, the boatswain, the chief engineer, and the captain, in whom the disease had a very rapidly fatal termination, suppression of urine having set in early. A consultation was held with the principal military medical officer, when it was decided that the captain died from an attack of specific yellow fever; that the disease was introduced into the ship by the sub-lieutenant, and communicated through him to the wardroom officers; that the captain must also have contracted the disease from him, as he was in the habit, when strong enough to be removed, to lie on a sofa in his (the captain's) cabin; and that, taking into consideration the rapidly spreading and malignant nature of the disease (six officers being then under treatment), it was of the utmost necessity that the ship should be removed as soon as possible to a cooler climate. This was accordingly done, the vessel starting at once with all despatch for Halifax, the effect of which was, that "the immediate arrest of the disease, with the improved condition of those suffering from it, was most marked as the temperature became reduced." In two of these cases only was albumen found in the urine; in a third, this secretion, as has been already observed, was completely suppressed from a very early period.

There were two cases of yellow fever in the Favorite, both of which proved fatal. The men had been on leave to Kingston, Jamaica, where the disease was prevailing among the merchant seamen. In both cases the attack was ushered in with rigors, followed by a high state of pyrexia, with much physical prostration and
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* Surgeon R. F. B. Head.

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mental depression, with giddiness, severe pain at the epigastrium, and great anxiety.

In the *Jason* there were two cases of yellow fever, both of which recovered. Forty-eight hours' leave had been granted to the ship's company at Port Royal, with the distinct understanding that no man was to go to Kingston. The Surgeon* says:—"After a three months' absence in Jamaica, in Cuba, and Haite, we returned to Port Royal on the 3rd of April. Things were in pretty much the same condition as when we left. Scarcely a day passed without a case of yellow fever in the Kingston Hospital, some of them of the most fatal type, and one death had occurred, just before our arrival, in the Naval Hospital at Port Royal. It was decided to give forty-eight hours' leave to the ship's company at Port Royal, strict orders being given that no men were to go to Kingston. Soon after the men went ashore it became known that some had gone to Kingston, and every exertion was at once made to get them back; but it was impossible to get hold of all, and some slept in Kingston on the nights of the 8th and 9th of April. On the 10th of April the *Jason* sailed for Barbadoes, to call at Aux Cayes and San Domingo, and on the 12th and 16th the two cases recorded as yellow fever occurred. Both these men slept in Kingston (in the same quarter of the town which supplied cases to the hospital); both men were well acclimatised, and were the only cases of fever met with during the month, and I have no doubt that both were true cases of the disease." In both the urine was distinctly albuminous, and in one it was suppressed for forty-two hours.

Seven cases of yellow fever appear in the returns from the *Philomel*, of which five proved fatal. The disease was contracted at Port Royal, Jamaica, and as soon as its true character was ascertained the vessel was ordered to proceed to Halifax, touching at Havana. On arriving at that port nine cases of fever were under treatment, and, instead of hurrying with them as rapidly as possible to the northward, the vessel, on the recommendation of the medical officer,† was detained at Havana; six of the cases were landed, the next day two, and the following day three; and of these eleven cases, three, including the commander of the vessel, died. Happily the disease did not spread further; but nothing could justify the adoption of a step so flagrantly in opposition to all experience as to detain a yellow-fever-stricken ship in the harbour of Havana, for the purpose of having her disinfected and fumigated. It was most unfortunate that, at a time when every hour was of such momentous importance to those on board, the exigencies of the public service should have necessitated the *Philomel* being ordered to the Havana, instead of making a direct course, and with as much speed as possible, to Halifax.

Two cases of yellow fever appear in the returns from the *Terror*, both of which proved fatal. The circumstances under which they occurred are most interesting and instructive. It will be remembered that on

the

* Surgeon W. H. Lloyd, M.D.

† Assistant-Surgeon J. G. Clarke.

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the arrival of the *Barracouta* at Bermuda, with several cases of yellow fever on board, the vessel was placed in quarantine, and her sick landed at the quarantine establishment on Ports Island, when, on the appearance of a fresh case some days afterwards, the civil authorities insisted upon the sick and the ship leaving the island, the cases were re-embarked, and the *Barracouta* left for Halifax. What occurred thereafter is thus reported by the Deputy Inspector General* of the Naval Hospital at Bermuda:—"Immediately after the sick had quitted Ports Island, due precautions were taken by the assistant surgeon† in charge. The bedding and clothes used by the officer who had died were destroyed by fire; those of the patients were submitted to a careful process of disinfection, and it was my order that the whole should be retained on Ports Island until the cold season had set in, an order which was strictly carried out. On the 2nd of August the nurse was discharged by order of the health officer, and my control over and connection with Ports Island ceased.

"On the 4th of September a boat arrived at the Hospital Creek, having on board two sick marines from Ports Island. The assistant surgeon‡ on duty, with a commendable prudence, before granting their admission into the hospital, sent for me; and, on consultation, we both came to the conclusion that the men were labouring under the symptoms of yellow fever. I immediately reported the circumstance to the senior officer in charge, and had the men at once removed to Ports Island.

"At a loss at first to account for this unexpected outbreak of fever, I soon learned that a party of Marines had been sent, on the 23rd of August, from the dockyard, to execute the ordinary repairs on Ports Island, where they had been ever since, occupying the wards of the hospital as a dormitory, and for ordinary barrack purposes.

"On the 6th instant, in the morning, one of the marines, and in the evening the other died. Fully alive to the risk the others ran of contracting the fever, I wrote to the senior officer, stating that 'in presence of the outbreak of yellow fever last week, at Ports Island, whereby, not only the two men attacked with the fever, but also seven healthy Marines (who happened to be of the working party) and one pilot were held there in quarantine, I beg respectfully to suggest, as one of the cases has already proved fatal, that these men, who, by accident, are compelled to be confined on a spot now proved still to contain the taint of a contagious fever, be removed to Halifax as soon as circumstances will admit, in company with a medical officer, a step which will give them the fairest chance of escape, and reduce to a minimum the risk to the general community.' From inability, I presume, to carry these suggestions into effect, no immediate action was taken, save an offer to remove the men on board a gun-vessel, which the civil authorities declined, and the men continued at Ports Island.

"Several days now elapsed without any further case occurring, when,

* Deputy Inspector General Thomas Nelson, M.D.

† Assistant-Surgeon Robert More, M.D.

‡ Assistant-Surgeon Thomas Bowen Thomas, M.D.

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when, on the 13th, the assistant surgeon* in charge of the quarantine establishment reported to me another man attacked with the specific fever. No sooner was his Excellency the Governor made acquainted with this untoward event, than he gave orders that the whole of the people detained in quarantine and Ports Island should be conveyed with the least possible delay to Halifax. The gunboat *Albacore* accordingly was selected to carry out this order; every dispatch was made to get her ready, and on the 18th she put to sea, carrying with her, in addition to her officers and crew, seven Marines, of whom one was sick with the fever, one coloured pilot, and two coloured nurses, with Dr. Thomas in medical charge."

Unhappily the fatal consequences of premature communication with a hospital which had contained yellow fever patients did not terminate with the *Albacore* leaving Bermuda. On the evening of the 20th, two days after leaving the island, Dr. Thomas was attacked with the fever. With most admirable self-denying thoughtfulness for those under his medical charge, he privately communicated his suspicions to the commanding officer, and to avoid any unnecessary alarm he expressed a strong conviction that the disease would not spread further, requesting that the nature of his illness might be concealed from the others. His attack seems to have been of great severity, and he succumbed to it on the evening of the fifth day, the service being thus deprived of a young officer of rare promise and of the highest professional attainments.

There were twenty six cases of yellow fever in the *Vestal*, of which four proved fatal. The narrative of this epidemic is of considerable interest, and is thus given by the medical officer† in charge :—

"On our arrival at Port-au-Prince, on the 6th of August, we found yellow fever raging on board the French gun-vessel *Curieux*, she having, it was reported, contracted it at Martinique, where the surgeon, who was the first attacked and the first death, was in the habit of visiting the hospital on shore, in which, at the time, were yellow fever cases. The disease spread rapidly through this vessel, and communicated itself to her consort, the *D'Estrees*, and before these ships left for the north, they had both lost their commander, surgeon, and several subordinate officers, besides a large number of men. This excessive mortality was no doubt owing to their remaining so long in the unfavourable climate of Port-au-Prince, through some unwillingness to leave the station. They made an attempt to check the spread of the fever in the *Curieux* by clearing out the ship, and billeting the men in a country house belonging to a French resident at Bizothon; but this measure was not crowned with the desired success, and the deaths continued to such an extent, that quite a cemetery sprung up near the villa. Finally, when they had lost the greater part of their men, they started for Fortress Monroë, the last report I heard from the unfortunate ship being that she had none of her original crew left.

"The *D'Estrees* hung on after the departure of the *Curieux*, but she

* Assistant Surgeon T. B. Thomas, M.D.

† M. Uppington Greany, M.D.

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she finally also left for the north, and for Europe, affording us, by the melancholy results of her procrastination, a warning, which proved useful to us subsequently. During our stay in the harbour of Port-au-Prince with these French vessels, every care was taken on our part to avoid communication with them, and on one occasion, when the D'Estrees anchored too close to us, we shifted billet, and gave her a wide berth, and these efforts of ours to prevent our crew getting infected, were crowned with success, for though we were unfortunately also attacked by the disease, it was not communicated to us either from the ship or the shore, but in a manner which I will now relate.

"On the 9th of September, 1869, Her Majesty's ship Britomart arrived at Port-au-Prince, for Port Royal, Jamaica, with some men belonging to Her Majesty's ship Defence, then supposed to be on the Haytian coast, but which vessel had in reality gone north, in consequence of the continuance of fever on board. The Britomart also brought the officer appointed acting surgeon of the Vestal. The men belonging to the Defence were discharged to this ship, and unhappily among them were two men who had been attacked with yellow fever while on the passage from Port Royal to Port-au-Prince, both, from the outset, very unpromising cases, but of whom one recovered. These men were on board the Vestal, over 36 hours, and no doubt exists in my mind that the subsequent spread of the disease in this ship was caused by direct contagion arising from their near presence.

"These men were landed on the morning of the 11th at Port-au-Prince, and placed in a house hired by the consul for us, and I was ordered to go on shore and attend them, which I accordingly did, having also under my charge Her Majesty's ship Britomart, which was ordered to remain at Port-au-Prince.

"As I have above stated, one of the two men first attacked died on shore, as did also a boy belonging to Her Majesty's ship Defence, who was attacked on board the Britomart. There were several cases of fever on board the Britomart belonging to her own ship's company, but they were all of a mild character, except the navigating sub-lieutenant, who had rather a sharp attack, the symptoms being those of a 'remittent,' but which yielded to free purgation, and general antiphlogistic treatment at the outset, and subsequent administration of quinine.

"The Vestal arrived back at Port-au-Prince on the 25th of September without a medical officer, the acting surgeon having been discharged to the Aboukir to do duty. While at Port Royal, several men were sent to hospital, some of them fever cases, but I have left it for the above-named gentleman to report on these, as I possess no official information about them. On the Vestal's arrival in the harbour of Port-au-Prince, I was ordered to go on board and see the sick, by the commander, and on doing so, found several men and officers convalescing from fever; and one boy, age 17, evidently attacked with yellow fever. On reporting this circumstance to the commander, he expressed an opinion, in which I concurred, that it would be advisable to land the case at once, and as the ship was under orders for sea the same evening, I did so without

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delay, and placed him, as well as my other patient, under the care of a local practitioner of much repute, and a graduate (M.D.) of the University of Paris.

"We did not start on the evening of the 25th, as at first intended, but left early next morning, having the Britomart in tow. We towed her as far as Cape Dame Marie, and then went for a cruise to Turk Island and Magua. On the evening of the 26th, the next case of yellow fever appeared in the person of a wardroom servant, and though the commander had at first purposed to run across to Santiago de Cuba, on my reporting to him that the case was one of undoubted yellow fever, he decided on returning to Port-au-Prince, where accordingly we arrived on the night of the 30th of September, and at daybreak next morning I removed him on shore by the commander's order, but he was then in a moribund state, and expired on the morning of the 2nd of October.

"We found that the boy previously landed had died on the morning of the 30th of September, but the other cases, two petty officers belonging to Her Majesty's ship Defence were doing well. On the evening of the 1st of October a consultation was held, when I gave it as my opinion that the only reliable measure for checking the progress of the disease, was immediate sailing for a colder latitude, and accordingly at noon on the 2nd of October we started for Halifax, having, up to this time, lost four men, viz., two belonging to Her Majesty's ship Defence, and two from our own ship's company. Our departure, I may here remark, was acquiesced in by Her Majesty's Chargé d'Affaires. It was proved that we had not left Hayti a day too soon, by the number of fever cases admitted to the list. On the 1st there were three; on the 2nd, four; on the 3rd, five; on the 5th, two; but by this time we were getting clear of Hayti, and the depressing influence which seemed to hang about its coasts, and the admissions began to decrease in number, the last case occurring on the 12th of October.

"On the night of the 11th of October, a petty officer of Her Majesty's ship Defence died; making the fifth and last death from the disease, and the third in the small number of Defence's men on board. The extent to which the fever spread among these men was very remarkable; among nine men there were six cases; and, as already stated, three of them fatal. This, of course, is explained by the fact that the first cases occurred among this little body, and the nurses were, as is usual, drawn from the patient's messmates, and contracted the disease in that way. Moreover, they being strangers on board our ship, were, I imagine, drawn more together than they otherwise would have been.

"The beneficial effect the reduction of temperature has on yellow fever was well exemplified in our case. On the 12th of October occurred our last case of fever, and on this day the thermometer had fallen from 90°, as at Port-au-Prince, to 81°, and of course continued to decrease as we went north, with the greatest benefit to our sick. The majority of these, however, were slight cases; in none was I able to find albumen in the urine, nor were there any cases in which black vomit appeared, though all had sickness of stomach, and some to a very distressing extent. The vomiting was altogether bilious, and

and amenable to the remedial measures I employed, chiefly saline effluents.

"I have reported one case as belonging to the 'Apoplectic Grade,' a form of yellow fever recognised by Dr. Macdonald, and which variety, being unaware of its existence, puzzled me at first a great deal when I found it occurring on board, but which I found less formidable to treat than Dr. Macdonald's cases, from which he deduced his experience; the convalescence was, however, protracted, and the reduction of strength remarkable. I have since learned from a medical man, that this form is not uncommon at Trinidad, but it would appear, notwithstanding, to be a rare variety of the disease.

"The state of the tongue in these cases was of two kinds, either white with injected papillæ, or yellowish brown, with red edges and tip, the redness in some approaching scarlet. No 'prognosis' could be formed of the cases from the presence of either of these two types, for of the fatal cases two had the tongue in the first mentioned state and three in the latter.

"The accession of the fever was generally sudden, the patient being all at once attacked with violent headache and lumbar pains, the majority of the patients describing their symptoms as coming on after meals, and usually I found that they had made a good breakfast or dinner, as the case may be. Of course I can understand that a man would hold out perhaps as long as he could before coming to the doctor; but our men were very watchful during the progress of this epidemic, and never delayed applying for relief as soon as they found anything the matter with them. Besides, I was very particular in inquiring, in each case, the length of the premonitory symptoms; and, as I have already stated, found that the attack came on suddenly, or if there were any premonitory warnings they escaped the patient's notice.

"Touching the presence of albumen in the urine, my experience has been, that in all cases in which it appeared there was also black vomit, and that they were synchronous in their occurrence. This, I am aware, is different from the general experience of my brother medical officers during the late epidemic; but I only describe the symptoms as they occurred to me. I do not even know if two or more distinct forms of fever, as distinct as 'typhus' and 'typhoid' are not now included under the general term of yellow fever, for the disease has not been fully reasoned out, as indeed is evident from the various quasi-specifics which have been put forward for its treatment. In the treatment of these cases attention was directed to obviating the tendency to death, as our great author happily puts it. I endeavoured to keep the bowels open, the skin and kidneys going, and to support the hourly loss of vital power, by nourishment and stimulants, a treatment which, after many conversations with practitioners in the various West Indian Islands, both before and subsequent to the outbreak in this ship, I look upon as the best in our present knowledge of the disease. Dr. Bellot, a great Havannah authority on yellow fever, is accustomed, I understand, to bleed in almost all his cases, if seen in the early stage; and I myself have been advised at Port-au-Prince to use the lancet, but I saw no case in which it would be allowable to do so. I should rather fancy

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that such a proceeding would be fatal to any chance of a patient's recovery.

"As for the 'Creole' treatment of the fever, so much vaunted by 'lay members,' who not only tell, but commit to paper, wonderful cures effected by it, all I can say is, that the least said about it the better. I was rather curious on the matter, for though I did not believe all I had heard or read about the coloured people's skill in this disease, I still thought it possible that some of their remedies might be of use. But after careful watching of some of the most renowned irregular practitioners at Port-au-Prince, I have come to the conclusion that they are ignorant of the disease to a marvel. Their drinks and potions are harmless—limes, pine-apples, &c. and some demulcents, forming the staple of them. Rubbing the whole body with a mixture of limes, camphor, and salt, is looked upon as almost enough to recover a man from 'death's door,' and as a stimulant, may not be altogether useless; but in their ignorance of the more ordinary rudiments of nursing, they do not only *passive*, but *active* harm. They think nothing of raising a man, however weak, bolt upright in the bed, to give him a drink; and I saw one poor French sailor, whose sudden death I attribute to his being placed erect in an armchair, though I endeavoured to point out to his attendant the danger of it; however, they being also his physicians, took no notice of these representations coming from a white man and a foreigner. Their obstinacy and confidence in their own superior knowledge make them very impracticable, and they require constant watching when you employ them as nurses, otherwise you will find that they calmly ignore your directions, and carry on their own treatment, as I found several times at Port-au-Prince to my great annoyance."

In concluding the history of the various outbreaks of yellow fever which occurred in the squadron on the North America and West Indies Station in the year 1869, it has been thought advisable to introduce the following observations on the cases which occurred in the Royal Naval Hospital at Port Royal, and on the subject of yellow fever generally, by the Deputy Inspector General of that establishment, an officer of great experience, and who has already enriched the literature of this disease by extensive and original observations.*

"Why one year should be more or less healthy than another is a question which cannot be answered with any degree of certainty, for after wet, dry, or the ordinary seasons, epidemics have been known to break out without any tangible cause for their appearance.

"If yellow fever be a specific disease, as observation denotes it to be, it must have a specific cause for its origin, and this cause must be in existence at the time of an outbreak of an epidemic. That some connection does exist between the cause and the atmospheric influences

* Vide "Statistical Report of the Health of the Navy for the Year 1867," Appendix, No. 11.

influences there can be little doubt, yet we qualify our belief by reservation, and are obliged to confess our inability to connect them by any exact rule. Sydenham, with an honesty which stamped his character, has said, 'I have carefully examined the different constitutions of different years, as to the manifest qualities of the air, yet I must own I have hitherto made no progress, having found that years (perfectly agreeing as to their temperature and other sensible properties) have produced very different tribes of diseases, and *vice versâ*.'

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"In 1869 the weather at Port Royal during the first part of the year was dry, but little rain fell, and a scarcity of water was felt; at the fall of the year, however, much rain fell, and heavy thunderstorms occurred.

"We know that organic germs, animal and vegetable, are hastened or retarded in their growth by meteorological or telluric influences, whether these influences depend on wet or dry weather, electric changes, activism, heat, or other causes; and if the germs which generate yellow fever approximate in any way to these organisms, the reason is plain that they too must be liable to the same influences.

"Although Bacon has laid down the rule, "*Non fingendum, aut excogitandum, sed inveniendum, quid natura aut faciat, aut ferat,*" a certain amount of speculation cannot be avoided, for with all the attention, the faithful and steady observation that may be brought to bear upon the study of causation, there is something that escapes our research, something that so baffles our endeavours and sets our efforts at naught, that despite a fixed determination to carry out our study, we are obliged to deviate in some measure from the mathematical path to seek one in the more fascinating, though the more misty, one of speculation.

"The history of the fever which occurred in 1869 would seem to favour the theory that the germs, which generated the epidemic, had their origin in the marshy and swampy grounds in the vicinity of the locality where the ships that became infected were anchored, and the choice made of these ships, to the exclusion of the others in the harbour, assisted towards confirming this belief. If, therefore, this theory be accepted, we must bring ourselves to admit that yellow fever may have birth in localities such as these; that its origin may be due to some effluvium, germ, or organism generated on the surface, or within the bowels of the earth; and if so, that it finds a habitat in such places, and that therefore yellow fever is endemic in the island of Jamaica.

"But in the admission and acceptance of these inferences there is reason to believe that howsoever generated and whatsoever its cause, this noxious principle differs *in toto** from that which produces simple

continued

* This opinion does not coincide with that expressed in the Report upon Quarantine addressed to Her Majesty in 1852, by the Commissioners appointed by the General Board of Health of England, to investigate this question with reference to yellow fever, "that the medical men who have had opportunities of personally witnessing this disease on the largest scale, and under the greatest

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continued fever and the types of remittent fever; for, as with the various poisons, whether organic or mineral, we find a special mode of action; each poison characterised by its group of symptoms, each group differing distinctly, one from the other; so do we find with the group of symptoms which characterise the various fevers of the West Indies which fall under observation, a distinct type for each, characterised by its own pathognomic signs; each so marked as to stamp it with an individuality dependent upon the essence of the cause, and with regard to the specific form of yellow fever, this would appear to receive confirmation from the history of the various epidemics which have occurred since the 17th century, whether described by a Ferreira da Rosa, a Simão de Cunha, a Chisholm, a Rush, a Blair, or a Louis; for in all these epidemics an individuality has been noticed, and in the epidemics which have occurred at various epochs in the same place, the same individuality has been observed. The epidemic of yellow fever which happened in Lisbon in the year 1723 differed in no ways, in its chief outlines, from that which devastated the same city in 1857.

“ The question has perhaps assumed a wider range than a simple summary of facts might have warranted, yet though it may not be immediately relevant to the case in point, it may be well to state here that the fevers in the West Indies do assume modifications which obscure their character, and render them less defined, and less precise in their outline. These modifications may be accounted for by the admixture and absorption into the system of other poisons beside that of yellow fever, which running a parallel course, jostle and confound the symptoms and characters in each, in such guise as to render them less distinct, but not in sufficiently marked a manner as to prevent them being recognised as diagnostic signs.

“ *Symptoms.*—The symptoms which characterised the sixty-four cases of yellow fever were chills, followed by headache, general malaise, rachialgia, pain of limbs, epigastric tenderness, nausea, vomiting, high pulse and temperature, a sordid or clean tongue, yellowness of the eyes and skin, albuminous urine, if not suppressed, suppression of urine, insomnia, jactitation, and black vomit, hæmorrhages, hiccough, subsultus tendinum, delirium, coma, and convulsions before death.

“ It was remarked that rigors ushered in the fever in thirty-eight of these cases, and this symptom was either observed, or had been sufficiently noteworthy to cause it to be mentioned by the patient; but though it was not recorded in the remaining twenty-six, it did not follow that it had not occurred, as from the little importance sometimes attached to it, whether from want of memory or state of the patient it may not have been mentioned. When the chills did occur, they varied in degree, being slight in some and severe in others

“ In every case there was headache. The symptom engaged the frontal

variety of circumstances, have, with scarcely one exception, arrived at the conclusion that intermittent, remittent, and yellow fever are modifications of the same disease influenced by peculiar conditions.”—“Second Report on Quarantine. Yellow Fever 1852. General Board of Health,” p. 4.

frontal part, and more especially the supraorbital region. Giddiness frequently accompanied the headache. The eyes wore an expression of heaviness, were congested, watery, and yellow, having in some that peculiar look which is noted as the heavy eye of the drunkard; they were ferretty and glistening in some cases.

"The expression of the face was a study in itself. It assumed a listless, dull, and sullen character, and in the bad cases was indicative of the stage of the disease. There was in some an expression of anxiety, in others apathy, whilst in many the natural expression remained. The decubitus throughout the progress of the disease was as a rule, dorsal.

"The face was dusky and of a mahogany hue, or of that colour which is remarkable in those portions of an English sailor's neck left exposed to the action of a tropical sun.

"Rachialgia was a distressing symptom, and much complained of; it was to the spine what headache was to the head, an indication of some abnormal state, and in no pyrexia is this symptom so well marked as it is in yellow fever, except it be in the first stage of small-pox; great complaint was made likewise of the limbs.

"Sighing was a frequent sign of extreme weakness with the bad cases, and when interrupted was of ominous prognosis.

"Epigastric tenderness was indicative of nervous depression; it was sometimes met without its concomitant symptom, vomiting; where black vomit was urgent, the tenderness was usually great, still it did not follow that its degree coincided with the quantity of matter vomited.

"This distressing symptom of vomiting was observed in the majority of cases which offered any degree of severity, and even in those which terminated favourably, it was sometimes one of the first symptoms and the source of much distress. Of the sixty-four cases it was not present in sixteen. In the forty-eight cases in which this symptom appeared, the matter ejected varied in quantity as in quality. It was sometimes caused by the ingestion of food or drink, and this occurred:—

In 11. Where vomiting was readily induced by taking milk, water, medicine, or food of any kind.

„ 5. The matters vomited were the ingesta, and only occurred some time after.

„ 3. A greenish bitter fluid formed the matters ejected.

„ 1. Blood, which must have been swallowed, as there was oozing of this fluid from the gums.

„ 6. Flocculent brown matter.

„ 22. Black vomit.

„ 16. There was no vomiting.

"In the twenty-two cases in which black vomit occurred this symptom appeared:—

On the 2nd day of the fever in	-	-	-	5
„ 3rd „ „	-	-	-	5
„ 4th „ „	-	-	-	5
„ 5th „ „	-	-	-	5
„ 6th „ „	-	-	-	2

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"It was sometimes preceded by acid eructations, and a burning pain at the epigastric region; it would be ejected seemingly without effort, and in great quantities, a gallon in the space of twelve hours. When about to settle after having been ejected, the black vomit assumed the appearance of sooty patches in water; frequently when mixed with mucus, it clung to the sides of the vessel, and offered an appearance which is not to be mistaken. It always presented an acid reaction.

"Under the microscope this black matter was amorphous, and of a reddish brown colour; it was sometimes mixed up with columnar-epithelium, and cylindrical stomach epithelium. No animalculæ were ever seen.

"It was not a necessary consequence for the disease to prove fatal when black vomit was a symptom, for of the above twenty-two cases, sixteen died, whilst six recovered.

"Black vomit is not a symptom limited to yellow fever; it is observed in remittent fever, and has occurred as a symptom in subjects who have sustained severe nervous shocks from injury.

"Black vomit had, for some persons, a peculiar smell by which it was recognised, but this peculiarity was perceptible to only a few. It possessed no virulent quality, for the medical men and the nurses were occasionally bespattered with this matter, but in no instance was any evil consequence known to ensue.

"Besides the black vomit, hæmorrhages were observed in twenty-seven:—

From the mouth and gums it occurred in	-	-	-	11
" nose	-	-	-	7
" urethra	-	-	-	1
" petechiæ in the legs	-	-	-	1
Mixed with the urinary secretion	-	-	-	1
In stool	-	-	-	6

"The colour of the skin varied from a light citrine hue to a deep golden, and in many of the fatal cases this colour deepened after death; and this was likewise observed in several who recovered, in whom, with the progress of convalescence, the colour became more pronounced. The conjunctivæ sympathised in colour with the skin.

"The temperature of the surface was always above the normal line; it ranged between 99° and 106°. Where the skin was dry, the sense of touch conveyed a pungency and tingling to the fingers; but when, as it frequently happened to be, moist, the touch indicated a temperature at variance with the thermometer, for when the surface seemed cool, this instrument showed a high degree of temperature, so that the hand could not be depended upon. The skin was frequently greasy, and had a shiny appearance.

"The tongue varied; it sometimes was clean, sometimes coated, and when coated, was white, yellow, or brown. In a few cases it had the appearance of raw beef, and when hæmorrhage was occurring from the gums, or the buccal cavity, it was coated with blood.

"The pulse was quick and frequent at the commencement of the fever, became sometimes irregular and intermittent, beating slow and measuredly when convalescence set in. The causes which produced this slowness of the pulse, so remarkable during the con-

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valescence of yellow fever, were owing to some modification of the blood, whereby its stimulating powers upon the action of the heart became diminished, and this may have been due to the poison of yellow fever not being entirely eliminated from the system, or to an admixture of bile with the vital fluid, depressing the nervous system. In fevers of other types, the sudden fall of the pulse would be indicative of the approach of typhoid symptoms, but not so in yellow fever, where the pulse frequently falls as low as forty, the patient having entered convalescence.

"The urine secreted was frequently normal in quantity, even in the bad cases, whilst in a few there was entire or partial suppression. This suppression of the secretion was always a bad symptom, it occurred entirely in four, partially in twelve. It sometimes happened that no urine was voided, and this would have been considered an entire suppression had not the catheter, when introduced, drawn off a quantity of this secretion, which was retained, owing to the apathetic state of the system. In one instance the urine was charged with blood to such an extent as to form half the quantity of the secretion.

"The characteristic and essentially pathognomic symptom of this disease was the presence of albumen in the urine, and in every one of these sixty-four cases this system obtained, and it may be stated with some degree of certainty, that where this symptom was present, together with a high temperature of the body, provided likewise, the observation has taken place within the limits of the habitat of yellow fever, or where an epidemic of this fever may be prevailing, this diagnosis would, as a rule, prove correct.

"Albuminuria is a symptom met with in many diseases, and it frequently co-exists with the symptoms which characterise remittent fever; but the symptoms, the habitat, the history, and other circumstances which attend remittent, would assist in distinguishing it from the specific form of yellow fever.

"Insomnia; restlessness; delirium; a tremulous state of the muscles; subsultus tendinum; hiccough; carphology; and convulsions, were all characteristic of the severity of the disease.

"In one of the fatal cases, the delirium commenced by symptoms very much allied to those of aphasia, or more properly to those of amnesia, for it evinced itself by the loss of words to express the idea, and the employment of others having no connection with the idea the patient wished to convey, and of this he showed consciousness by a gesture of impatience. At the post-mortem examination no abnormal change was observable in the third convolution of the left side of the anterior lobe of the cerebrum, nor was the corpus striatum of that side in any way affected.

"Hiccough occurred in eight of these cases.

"In six cases convulsions were observed; they preceded death, and were expressed by convulsive twitchings of the muscles of the face, arms, and body. In one they were of such severity as to cause the patient to fall from his bed, and a fracture of the skull, found after death, could only be attributed to the fall sustained during one of the fits. These convulsions may have been due to the effects of

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uræmic poisoning, to congestion, or to a superabundance of bile in the blood.

" The saliva; cutaneous perspiration; black vomit; urine; and hæmorrhagic stools presented a highly acid reaction.

The ages of the sixty-four persons attacked were:—

Between the ages of 17 and 25	-	40.
" " 26 " 30	-	12.
" " 31 " 38	-	10.
Of the age of " - 43	-	2.

" The subjects, prior to the attack, were, as a rule, strong and vigorous, and only in a very few exceptions did the contrary obtain. It was remarkable that the weakly, and those addicted to intemperance, were less liable to the infection.

" A theory which obtained among the old practitioners of the West Indies was, that a relaxed state of the system was necessary to health, and they inculcated that all Europeans coming to the West Indies should reduce their constitutions by repeated bleedings, purgings, and other depressing measures, so as to bring it to the level of the creoles. It did, certainly, appear that the yellow fever poison had less hold upon a debilitated and worn-out constitution, and as has been remarked that scrofulous, tuberculous, and dirty people furnish the best nidus for the lodgment and development of parasitic disease; so did it happen that the robust and healthy constitution proved to be the aptest soil for the development of this virus, and the best pabulum for it to feed upon.*

" The eruptions observed in the course of the fever in these sixty-four cases were:—

A vesicular eruption on nates in	-	-	-	1
Herpes Labialis (proving hæmorrhagic in 1)	-	-	-	5
Petechiæ on legs (hæmorrhagic)	-	-	-	1
Lichen tropicus	-	-	-	1
Urticaria	-	-	-	1

" The deaths in the majority of these cases occurred on the fifth day of the fever.

" *Treatment.*—When it so happened that the patients came under observation at the onset of the fever, the first care was to get rid of all vitiated secretions by means of purgative medicine, and this provided no indication to the contrary existed, for the bowels were sometimes lax; but even so, as this laxness depended upon some vice of the secretions, it was considered advisable to use laxatives to assist in improving this state. With the regulation of the bowels the other symptoms such as headache, nausea, heat of surface, were attended to. The headache was alleviated by cutting the hair, if long, and by the application of cold lotions; shaving the head was not required.

" Nausea and vomiting were partly subdued by the application of sinapisms,

* Although this relaxed state of the system afforded an immunity from yellow fever, it certainly predisposed to all other forms of fever not of the yellow type.

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sinapisms, and of chloroform in vapour, to the epigastric region; by the internal exhibition of effervescing draughts, chlorodyne, chloroform, and carbolic acid, and ease was sometimes found in giving small quantities of broths and wine; ice always proved a grateful assistant in the alleviation of this symptom. Sponging the surface daily, and keeping down the temperature of the body, always proved beneficial, and grateful to the patient's feelings.

"In insomnia and jactitation sleep and rest frequently followed bathing the head, face, chest, and arms with cold water; chlorodyne proved of some good in the most obstinate cases of sleeplessness.

"Where hæmorrhage occurred from the mouth, nostrils, &c., the application of the tinct. ferri perchlorid externally, succeeded in checking them. When the hæmorrhage was internal, gallic acid, and carbolic acid with ice were exhibited with partial benefit.

"Hiccough found a relief in a variety of medicine, but it was impossible to say which would produce a cessation of the symptom, for a small portion of ice would frequently check it, where other more powerful medicines would fail.

"The chief measure adopted in the treatment of this disease was directed towards counteracting the effects of the toxic element, and this consisted in the use of medicines possessing antiseptic properties, and a preference was given to sulphurous acid whether alone in solution in water, or combined with the alkalies. The bisulphitis certainly possessed some power, but it was difficult to state whether this power consisted in arresting or retarding morbid fermentation, or whether it only assisted, by the alkaline properties of these salts, in neutralising the highly acid secretions of the system, and thus restoring them to their normal state.

"A trial was given to carbolic acid; it was of benefit in those cases where there was great irritability of the stomach, and a tendency to hæmorrhage; but it did not seem to possess the highly vaunted antiseptic properties in this fever which were attributed to it by some.

"When the stomach could receive food (it mattered little at what period of the disease), broths, beef tea, whether made from beef, essence of beef, ext. carnis or otherwise, were given, and wine was likewise administered at the same time, especially if it proved grateful to the patient; and these were given with a view of assisting to expel the septic, and of supplanting it by fresh and healthy material.

"*Post-mortem Appearances.*—As the disease has proved chiefly fatal to young men, who, up to the day of seizure, had been in the full enjoyment of health, it followed that the bodies examined were muscular and well nourished, and it did seem that the waste of tissue was not so great, nor carried to that extent, which an "*à priori*" argument, prompted by the great virulence of the symptoms during life, would have suggested.

"The hypostatic marks were of a deep leaden blue colour, and occupied the dependent parts of the body, whilst the skin of the chest, of the abdomen, and upper part of the thighs presented hues varying from citrine to the deepest yellow.

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"Head.—The meninges were congested in several, and where any adhesions were found between the calvarium and dura mater, blood in great or small quantities flowed on the removal of the former. The cerebral substance was usually firm; the centrum ovale presented puncta vasculosa, and a limpid clear fluid was sometimes found in the ventricles.

"The lungs and heart were, as a rule, healthy.

"The stomach and intestines frequently presented inflammatory patches on their mucous coats, but these patches were not significant of specific disease.

"When black vomit had occurred during lifetime it was found in the stomach after death. The mucous coat of the stomach when washed of this matter, sometimes offered a healthy appearance unstained by this matter, with scarcely any apparent lesion; but it sometimes did happen that black specks attached themselves so firmly as to resist all washing; this coat was firm and could not readily be scraped off with a scalpel. It was observed to be partly congested in some, and wholly in a few. The congested patches presenting an arborescent appearance, or a surface having a series of punctated red dots.

"The liver, as a rule, was of a fawn colour, both externally and internally; was exsanguine when cut into, and under the microscope showed the hepatic cells to be obliterated or obscured by numerous oil globules. It was the organ most prominently affected.

"The spleen was natural in appearance and in structure, and this is characteristic in yellow fever, for in typhoid, typhus, measles, small-pox, scarlet fever, remittent and intermittent fevers, there is softening and enlargement of this organ, whilst none is observed in yellow fever.

"The kidneys were sometimes congested.

"The bladder in cases of suppression was found empty and collapsed upon itself."

It is impossible to review the history of the different outbreaks of yellow fever which occurred in the squadron on the North American and West Indian Station in 1869, without reflecting upon the unhappy necessity that appears to have existed, of keeping fever-smitten ships in localities where a high atmospheric temperature prevailed. It cannot be too often repeated nor too strongly stated, that the only chance for a ship's company, amongst whom yellow fever has made its appearance, is to have them conveyed with the utmost speed to a cold latitude. The accumulated mass of experience on this point is so great that nothing but the most urgent necessity should justify any temporising or procrastination in respect to this measure. Although the station orders are explicit and most stringent on this point, and senior and commanding officers are, generally speaking, aware of the nature of the disease and of the only effectual antidote, there is reason to fear that in some instances they have not appeared to be alive to the instant necessity of adopting it, and thus valuable lives have been sacrificed which a clear appreciation of the position, and promptitude of action, might have saved.

II. General Diseases.—Section B., or Constitutional Group.North
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Under this head 504 cases were entered on the sick-list; viz., 278 of rheumatism; one of gout; 123 of primary syphilis; eighty-four of secondary syphilis; two of scrofula; and sixteen of phthisis pulmonalis. Of these the total number invalided was twenty-nine, and three cases of phthisis terminated fatally.

Rheumatism.—Compared with the preceding year there was a reduction in the ratio of cases of this disease to the extent of 12·6 per 1,000, but there was a trifling increase in the invaliding-rate. Each case of rheumatism was, on an average, fifteen days under treatment.

Syphilis, Primary and Secondary.—There was a great decrease in the ratio of cases of primary syphilis compared with the preceding year; a decrease in fact to the extent of 32·9 per 1,000. There was also a decrease in the ratio of cases of secondary syphilis. Altogether 123 cases of primary syphilis were entered on the sick-list, and eighty-four of secondary syphilis. Each case of primary syphilis was on an average between thirty-eight and thirty-nine days under treatment, and each case of secondary syphilis a little over thirty-six days. But little is to be said in connection with these cases. One or two of the medical officers comment on the advantages the ship's company had enjoyed by the legislation which had taken place in several places in connection with the surveillance of prostitution. The surgeon of the Jason observes:—

“I am glad to be able to say that a change for the better in this matter is now to be hoped for in Barbadoes. The working of the Contagious Diseases Act was commenced in the month of November, and promises to succeed very well. Fifty beds have been provided in the Colony, in a hospital that seems to answer the purpose very well, and for the future the Home Government takes half the expense, the yearly estimated cost being 25*l.* a bed. In the same enclosure is a well-arranged building for examination, and the whole arrangements appear to be very satisfactory. The senior practitioner in the island has taken charge of both the examining department and hospital, and there is no doubt that the law will be effectually worked. There is an examination day every week, and up to the end of December there had been seven. Out of about seventy women examined, eighteen had been detained in the hospital. The police have got close upon 500 names on their list, and there seems a willingness on the part of the women to come forward for examination.

“Trinidad has passed, and just commenced to carry out, an Act on the same model, without any money aid from home. No special appointments have been made in connection with it. A few beds in the Colonial Hospital are set apart for the purpose, and the resident surgeon carries out the duty of examining officer. Five patients had been admitted when I was there in the early part of January 1870. The number of prostitutes cannot be nearly so large as at

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Barbadoes with its garrison, but the law must prove beneficial, if only as an example to the smaller islands, and may save us much disease."

The staff surgeon of the Royal Alfred* observes, with reference to some cases of syphilis: "These cases were contracted at Halifax, where, from some causes which I could not ascertain, the measures adopted for putting down prostitution were much laxer than they had been heretofore. But the greater prevalence of the disease among our men may probably be accounted for by the greater intimacy existing between them and the female domestics of the city, than during the first year of the ship's commission, when there was not a single hard chancre among them. The amount of amateur prostitution carried on at Halifax is very great, and I believe the amount of disease is in equal proportion; disease which the Contagious Diseases Act, if in force, which it is not, at Halifax, would have little or no control over. The number of professional prostitutes, I believe, was comparatively few in 1867 and 1868, but in the year 1869, on account of the less stringent measures that were put in force with the view of suppressing prostitution, it appeared that considerable importations of unfortunates had arrived from other parts of the States."

Another medical officer† writing of the same place, observes: "Syphilis is much more common here than formerly, and if dirt and personal uncleanness will encourage it, the lower classes of prostitutes give it ample opportunity. At one time severe restrictions, almost prohibitory, were placed by the municipal government over houses of ill-fame, which had the effect of checking open prostitution, although it encouraged much irregular intercourse and illegitimacy. But these restrictive regulations have lately been relaxed, and now prostitutes abound in open competition and shame.

"In a sea port and garrison town such as Halifax, the operation of a 'Contagious Diseases Act' would be of great advantage in a sanitary and economic point of view. The people of Halifax would be willing to adopt it, but it rests with the Dominion Government to declare it. One difficulty lies of course in the expense, which the Colony is scarcely willing to incur without the proper support and assistance of the Home Government and Exchequer; and, as the subject affects the interests more of the soldiers and sailors of the Crown than the inhabitants themselves, it is natural that they should hang back until England declares what amount of the expense she will bear in carrying out the provisions of such an Act."

III. Diseases of the Nervous System, and Organs of the Special Senses.

Class III.

One hundred and eleven cases of all forms of disease were admitted under this head, of which eighteen were invalided and one proved fatal. The fatal case was one of apoplexy. It occurred in the person

* Staff Surgeon D. Lloyd Morgan, M.D.

† Staff Surgeon Wm. Loudon Gordon, M.D.

person of an officer of the Royal Alfred, who was debilitated in constitution, and had not recovered a severe injury he had sustained some months previously, when he had his nasal bones fractured, and suffered concussion of the brain. Just before his last fatal attack, he had been in his usual health, but had been much fagged and worn by arduous duties. He had seated himself at luncheon after a forenoon of hard work, and had just commenced eating when he was observed to become suddenly deadly pale, with a painful expression of face, and attempting to make an effort to speak, but almost immediately afterwards he fell back unconscious, and was removed insensible to his cabin. It was at once evident that there was no hope. At first he could move both arms and legs, but it soon became apparent that paralysis of the right side of the body had taken place, which at first partial became in a few hours complete. He never rallied, and death took place in twenty-four hours. He was fifty-two years of age, with the arcus senilis well marked. He had a pale face, with a square set body and short neck.

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IV. Diseases of the Circulatory System.

Under this head forty-six cases of various forms of disease were entered on the sick-list, of which thirteen were invalided and two proved fatal. Compared with the preceding year there was a reduction in the ratio of cases to the extent of 3.9 per 1,000 in the invaliding rate of 2.2, and in the ratio of mortality of 1. Of the two fatal cases one occurred in the person of a petty officer of the Doris, who had long been excused from all heavy duty, and was merely retained on board pending his discharge from the service, his time having expired. The day previous to his death he heard of his discharge and of the pension that had been awarded him, and the excitement consequent thereon is said to have been the cause of his death.

Class IV.

The other fatal case was that of a stoker of the Philomel. He died on the passage home, in the mail steamer, having been invalided for very extensive head disease.

V. and VI. Diseases of the Absorbent System and Ductless Glands.

Sixty-five cases of sympathetic bubo appear under this head. The average duration of each case was about nineteen days and a half, but they possessed no interest in any other respect.

Class V.
and VI.

VII. Diseases of the Respiratory System.

Under this head 475 cases were entered on the sick-list, of which seven were invalided and four proved fatal. Ordinary catarrh was the most common affections, and of this alone 408 cases were under treatment. They were of but little importance, however, the average duration of each case being a little over six days.

Class VII.

Of the fatal cases three were from pneumonia, and one from bronchitis.

A boy of the Jason was entered on the sick-list on the 21st of April, at Barbadoes. He had been previously healthy, but on that day

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Class VII.

day he was seized with pain over the lower part of the right chest accompanied by a good deal of febrile disturbance, cough, and slight mucous expectoration. Under the treatment to which he was subjected, the symptoms were ameliorated, and although a friction sound became audible at the seat of pain, he appeared to improve until the 25th, when a re-accession of fever took place with dyspnoea and a constant short cough, the pain increasing in severity. On the 29th the expectoration was dusky and slightly tinged with blood. crepitation coarse and fine was audible all over the right lung, and the dyspnoea and cough had increased. On the 1st of May he was discharged to the Military Hospital at Barbadoes. At that time there was no improvement in his symptoms: his strength had fallen off, and there was still much fever. The pulse was 104. Temperature 103. Skin moist. The cough was very frequent and distressing, and he had some diarrhoea.

In the Military Hospital he improved slightly up to the 17th of May, when the cough became worse. On the night of the 17th he suddenly became much lower, the upper part of the right lung being congested, and râles in every part of it. At the same time the left was emphysematous, and doing very little work. He died on the morning of the 18th.

On post mortem examination of the body, the right lung was found to be firmly attached to the costal pleura, so much so that it was with great difficulty that a separation could be effected. On cutting into the lung it seemed to be almost a solid mass, small drops of pus escaping slowly from some of the cells. It seemed never to have recovered from the third stage of the original disease. The left lung was emphysematous, but otherwise healthy.

There was nothing of interest in the other cases.

VIII. Diseases of the Digestive System.

Class VIII.

Under this head 759 cases of various forms of disease came on the sick-list; of which, 144 were cases of cynanche; 217 dyspepsia; and 265 diarrhoea. These cases, as a rule, were of a very trivial character, the average duration of each case of cynanche being about eight days; of each case of dyspepsia, four days; and of each case of diarrhoea, five days.

Of thirty-one cases of dysentery that were under treatment, twenty-five appear in the returns from the Terror, and of these, eighteen occurred between the 1st of October and the 12th of November. The disease is said to have been of a subacute character, but the information given with respect to it is of the most meagre description. The average duration of each case on board ship, and in hospital, were a little over twelve days.

Of the total number of cases in this class entered on the sick-list, ten were invalided, viz.: one for dyspepsia; one for chronic diarrhoea; five for hernia; and three for diseases of the liver.

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Class IX.
and X.

IX. and X. Diseases of the Urinary and Generative Systems.

Two hundred and four cases of various forms of these diseases were entered on the sick-list, 123 of which were cases of gonorrhœa, and fifty-seven of orchitis, chiefly of gonorrhœal origin. One case of Bright's disease, and one of stricture were invalided. The average duration of each case of gonorrhœa was about sixteen days, and of each case of orchitis seventeen days.

The case of Bright's disease occurred in the person of a lamp-trimmer of the Jason. He had had an attack of hæmoptysis three years previously, when at Halifax, and had subsequently been five times on the sick-list; and under treatment, at other times, for symptoms of tubercular disease. While under treatment for incipient phthisis in November 1868, his ankles and legs became cedematous, continuing so for two months. This subsided, and was followed by œdema of the face, the eyelids being for some time nearly closed. He had for a long time complained of pain in the thighs and knees, and his appearance and complexion were of the bloated waxy character of Bright's disease. From the beginning of the year his urine had been highly albuminous, with a specific gravity of 1.020.

XI. Diseases of the Organs of Locomotion.

Seventeen cases appear under this head, the average duration of each being about three weeks. They were chiefly cases of synovitis and bursitis.

Class X.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Boils, abscesses, ulcers formed the great bulk of the cases coming under this head. Of the two former 949 cases were entered on the sick-list, of which four were invalided; and of the latter there were 310 cases, of which five were invalided. No features of interest were connected with the majority of these cases; but an interesting case occurred in the Royal Alfred, and was one of those invalided. It is thus reported on by the Staff Surgeon* of the ship:—"The patient was an able seaman, who had been undergoing cell punishment. He was entered on the sick-list on the 30th of January, complaining of a deep-seated pain in the left hip, between the trochanter major and the tuber ischii, and in the course of the sciatic nerve. The case was treated as one of a rheumatic character, as there was no history of any previous injury. There was no indication of any inflammatory action going on until the 18th of February, when it was observed that the man had been suffering from rigors on the previous night; the pulse was 120, and the temperature increased. There

Class XII.
and XIII.

* Staff Surgeon David Lloyd Morgan, M.D.

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There was discovered deep-seated fluctuation at the seat of pain. On the 19th the evidence of the formation of pus became more distinct within an area bounded above by the brim of the pelvis, and below the junction of the upper with the middle third of the thigh, and laterally by the tuber ischii and great trochanter. The fluctuation was more distinct at the upper and lower parts of the tumour than over its centre, where, indeed, it was but obscurely felt, if at all. It was found, however, by palpation, that the matter above communicated with the matter below. A valvular incision was made into the most depending part of the tumour, in an oblique and upward direction, with a broad scalpel, previously dipped in the oil and carbolic solution of Lister; the point of puncture, also, being covered over with a square piece of calico, also dipped in the solution. There was a copious discharge of matter, mixed with small clots of blood, evidently the result of a former deep-seated contusion and extravasation, caused, it afterwards transpired, by the rough handling which the man underwent when being secured by the ship's corporals, with the view of preventing him making a disturbance when in a very excited state from the effects of drink. The valvular opening was kept patent with lint dipped in the antiseptic solution. A compress was applied to the tumour from above downwards, and the opening was carefully dressed with the carbolic and paste. It will be seen by reference to the details of the case, that the abscess was very nearly closed, when, in my absence, the man was allowed to walk about; the result was inflammation and suppuration. The patient was discharged to Bermuda Hospital in my absence, and invalided from that establishment. It is very clear that this case would have turned out quite as successful as every other case has done under my care, treated after Lister's antiseptic plan, if, unfortunately, the dressing had not been discontinued, and the patient allowed to walk about."

Unclassed Diseases.

Under this head 103 cases of debility, five of delirium tremens, and two of poisoning were entered on the sick-list. Of the cases of debility, eighteen were invalided, and two proved fatal.

Of the cases of delirium, one occurred in a warrant officer, one in a shipwright, one in an artificer, one in a stoker, and in one the rating has not been ascertained.

Of the two cases of poisoning, one was alcoholic, the other by lead.

Wounds and Injuries.

Three men sustained fatal injuries. Of these one fell from aloft and dislocated his neck; one sustained fracture of the skull by being struck with a windlass; and one fell over a pier, and sustained a fatal injury of the spine.

Nine persons were drowned; one by falling into a dock; one in attempting to swim ashore; one in attempting to swim across a ferry; three by falling overboard; two by capsizing of boats; and the circumstances under which one man was drowned have not been given.

The

The total number of deaths was eighty-two, which is in the ratio of 23·4 per 1,000, being an increase compared with the preceding year equal to 14·2 per 1,000. That this large increase was almost entirely due to the mortality from yellow fever, is shown by the fact that deducting the deaths from that disease, the ratio of mortality for 1869 would only have been 9·7.

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Invalided.

Under General Diseases, Section A., four persons were invalided, viz., three for simple continued fever, and one for ague; and under Section B., twenty-nine persons were invalided; thirteen being for rheumatism; one for primary syphilis; six for secondary syphilis; two for scrofula; and seven for phthisis pulmonalis. Eighteen persons were invalided for diseases of the nervous system, and organs of the special senses; thirteen for diseases of the circulatory system; seven for diseases of the respiratory system; ten for diseases of the digestive system; two for diseases of the urinary and generative system; nine for diseases of the cellular tissue and cutaneous system; eighteen for unclassified diseases; and ten for wounds and injuries of various kinds. The total number invalided was 120, which is in the ratio of 34·2 per 1,000, being a reduction compared with the preceding year equal to 4·6 per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Small-pox - - - -	1	·2	—	—	1	·2
Measles - - - -	5	1·4	—	—	—	—
Simple continued Fever - -	511	146·	3	·8	4	1·1
Yellow Fever - - - -	100	28·5	—	—	48	13·7
Ague - - - -	26	7·4	1	·2	—	—
Remittent Fever - - - -	26	7·4	—	—	2	·5
Cholera - - - -	1	·2	—	—	—	—
Pyæmia - - - -	1	·2	—	—	2	·5
Erysipelas - - - -	12	3·4	—	—	—	—
II. General Diseases, Section B.:						
Rheumatism - - - -	278	79·4	13	3·7	—	—
Gout - - - -	1	·2	—	—	—	—
Syphilis { Primary - - - -	123	35·1	1	·2	—	—
{ Secondary - - - -	84	24·	6	1·7	—	—
Scrofula - - - -	2	·5	2	·5	—	—
Phthisis Pulmonalis - -	16	4·5	7	2·	3	·8
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - -	1	·2	—	—	1	·2
Sunstroke - - - -	15	4·2	—	—	—	—
Paralysis - - - -	1	·2	1	·2	—	—
Vertigo - - - -	10	2·8	2	·5	—	—
Epilepsy - - - -	13	3·7	6	1·7	—	—
Neuralgia - - - -	15	4·2	—	—	—	—
Insanity - - - -	7	2·	3	·8	—	—
Diseases of the Nervous System	4	1·1	1	·2	—	—
Diseases of the Eye - -	31	8·8	3	·8	—	—
Diseases of the Ear - -	13	3·7	2	·5	—	—
Diseases of the Nose - -	1	·2	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the { Functional -	29	8·2	2	·5	—	—
Heart - { Organic -	6	1·7	5	1·4	2	·5
Aneurism - - - -	1	·2	—	—	—	—
Varicose Veins - - -	10	2·8	6	1·7	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	65	18·5	—	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	1	·2	—	—	—	—
Catarrh - - - - -	408	116·5	—	—	—	—
Hæmoptysis - - - - -	6	1·7	3	·8	—	—
Asthma - - - - -	3	·8	—	—	—	—
Other Diseases of the Lungs -	57	16·2	4	1·1	4	1·1
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	144	41·1	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - - -	1	·2	—	—	—	—
Dyspepsia - - - - -	217	62·	1	·2	—	—
Dysentery - - - - -	31	8·8	—	—	—	—
Diarrhoea - - - - -	265	75·7	1	·2	—	—
Colic and Constipation - -	54	15·4	—	—	—	—
Hæmorrhoids - - - - -	12	3·4	—	—	—	—
Hernia - - - - -	10	2·8	5	1·4	—	—
Worms - - - - -	8	2·2	—	—	—	—
Other Diseases of the Stomach, &c. - - - - -	10	2·8	—	—	—	—
Diseases of the Liver, &c. -	7	2·	3	·8	—	—
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	9	2·5	1	·2	—	—
Diseases of the Bladder - -	3	·8	—	—	—	—
Gonorrhœa - - - - -	123	35·1	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems—<i>continued.</i>						
Diseases of the Organs of Generation - - - -	4	1·1	—	—	—	—
Stricture - - - -	8	2·2	1	·2	—	—
Orchitis - - - -	57	16·2	—	—	—	—
XI. Diseases of the Organs of Locomotion :						
Diseases of the Bones, Joints, &c. - - - -	17	4·8	—	—	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :						
Phlegmon and Abscess - -	949	271·1	4	1·1	—	—
Uleer - - - -	310	88·5	5	1·4	—	—
Erythema - - - -	2	·5	—	—	—	—
Diseases of the Skin - -	48	13·7	—	—	—	—
Scabies - - - -	2	·5	—	—	—	—
Unclassed :						
Debility - - - -	103	29·4	18	5·1	2	·5
Delirium Tremens - - -	5	1·4	—	—	—	—
Poisoning - - - -	2	·5	—	—	—	—
Wounds and Injuries :						
Wounds, Injuries, &c. - -	888	253·4	10	2·8	3	·8
Burns and Scalds - - -	20	8·2	—	—	—	—
Submersion and Drowning -	8	2·2	—	—	9	2·5
Not stated - - - -	—	—	—	—	1	·2
TOTALS - - -	5,210	1488·5	120	34·2	82	23·4

TABLE, No. 2.

SHOWING the Number of Days' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-pox - - - -	2	- - -	2	—	—
Measles - - - -	52	- - -	52	·1	—
Simple continued Fever -	3,155	1,745	4,900	13·4	3·8
Yellow Fever - - - -	639	1,206	1,845	5·	1·4
Ague - - - -	151	121	272	·7	·2
Remittent Fever - - -	476	114	590	1·6	·4
Cholera - - - -	2	- - -	2	—	—
Pyæmia - - - -	8	- - -	8	—	—
Erysipelas - - - -	153	8	161	·4	·1
II. General Diseases, Section B.:					
Rheumatism - - - -	2,713	1,360	4,073	11·1	3·1
Gout - - - -	21	26	47	·1	—
Syphilis { Primary - - -	2,800	1,965	4,765	13·	3·7
{ Secondary - - -	1,794	962	2,756	7·5	2·1
Scrofula - - - -	10	67	77	·2	—
Phthisis Pulmonalis - -	303	763	1,066	2·9	·8
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - -	1	- - -	1	—	—
Sunstroke - - - -	123	80	203	·5	·1
Paralysis - - - -	21	42	63	·1	—
Vertigo - - - -	68	41	109	·2	—
Epilepsy - - - -	59	104	163	·4	·1
Neuralgia - - - -	81	- - -	81	·2	—
Insanity - - - -	66	163	229	6	·1
Diseases of the Nervous System	14	- - -	14	—	—
Diseases of the Eye - -	327	250	577	1·5	·4
Diseases of the Ear - -	158	105	263	·7	·2
Diseases of the Nose - -	1	11	12	—	—

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*cont^d*.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System :					
Disease of the { Functional -	271	243	514	1.4	.4
Heart - { Organic -	66	104	170	.4	.1
Aneurism - - - -	55	-	55	.1	-
Varicose Veins - - -	153	73	226	.6	.1
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - -	1,165	96	1,261	3.4	.9
VII. Diseases of the Respiratory System :					
Diseases of the Larynx - -	29	49	78	.2	-
Catarrh - - - -	2,328	328	2,656	7.2	2.
Hæmoptysis - - - -	10	41	51	.1	-
Asthma - - - -	27	24	51	.1	-
Other Diseases of the Lungs -	735	1,034	1,769	4.8	1.3
VIII. Diseases of the Digestive System :					
Cynanche - - - -	872	300	1,172	3.2	.9
Diseases of the Mouth, &c. -	1	-	1	-	-
Dyspepsia - - - -	845	122	967	2.6	.7
Dysentery - - - -	160	218	378	1.	.2
Diarrhœa - - - -	1,135	187	1,322	3.6	1.
Colic and Constipation - -	232	18	250	.6	.1
Hæmorrhoids - - - -	175	35	210	.5	.1
Hernia - - - -	71	48	119	.3	-
Worms - - - -	44	-	44	.1	-
Other Diseases of the Stomach, &c. -	77	143	220	.6	.1
Diseases of the Liver, &c. -	165	153	318	.8	.2

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems :					
Diseases of the Kidneys -	86	20	106	·2	—
Diseases of the Bladder -	32	34	66	·1	—
Gonorrhœa - - -	1,832	264	2,096	5·7	1·6
Diseases of the Organs of Generation - - -	40	159	199	·5	·1
Stricture - - -	78	120	198	·5	·1
Orchitis - - -	757	220	977	2·6	·7
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones, Joints, &c. - - -	257	98	355	·9	·2
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - -	7,416	884	8,300	22·7	6·4
Ulcer - - -	4,653	1,251	5,904	16·1	4·6
Erythema - - -	27	4	31	—	—
Diseases of the Skin - -	512	251	763	2·	·5
Scabies - - -	18	-	13	—	—
Unclassed :					
Debility - - -	895	700	1,595	4·3	1·2
Delirium Tremens - -	14	33	47	·1	—
Poisoning - - -	10	12	22	—	—
Wounds and Injuries :					
Wounds, Injuries, &c. - -	8,666	2,167	10,833	29·6	8·4
Burns and Scalds - -	305	6	311	·8	·2
Submersion and Drowning -	2	-	2	—	—
TOTALS - - -	47,400	18,572	65,981	180·7	51·6

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship on the NORTH AMERICAN AND WEST INDIAN STATION.

CAUSE OF INVALIDING.	Aboukir.	Barracouta.	Dart.	Defence.	Eclipse.	Favourite.	Gunboats.	Jason.	Niobe.	Philomel.	Phoebe.	Royal Alfred, 1st Commission.	Royal Alfred, 2nd Commission.	Royalist.	Terror.	Vestal.	TOTAL.
I. General Diseases, Section A.:																	
Simple Continued Fever -	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	3
Ague -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
II. General Diseases, Section B.:																	
Rheumatism -	2	-	-	2	3	-	-	-	1	-	1	-	1	1	1	1	13
Syphilis { Primary -	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
{ Secondary -	1	-	-	-	-	1	-	1	-	-	1	-	1	1	-	-	6
Scrofula -	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	2
Phthisis -	-	-	-	1	1	-	3	-	-	-	1	-	1	-	-	-	7
III. Diseases of the Nervous System and Organs of the Special Senses:																	
Paralysis -	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Vertigo -	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
Epilepsy -	-	-	-	2	-	1	-	-	1	1	-	-	-	-	1	-	6
Insanity -	1	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	3
Diseases of the Nervous System -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Diseases of the Eye -	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	3
Diseases of the Ear -	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	2
IV. Diseases of the Circulatory System:																	
Disease of the { Functional -	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
{ Organic -	-	-	-	-	-	-	-	-	-	-	1	3	-	-	1	-	5
Varicose Veins -	-	-	-	2	-	1	-	1	-	-	1	-	-	1	-	-	6
VII. Diseases of the Respiratory System:																	
Hæmoptysis -	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	3
Other Diseases of the Lungs	1	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	4

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued.*

CAUSE OF INVALIDING.	Aboakir.	Barracouta.	Dart.	Defence.	Eclipse.	Favorite.	Gunboats.	Jason.	Niobe.	Philomel.	Phoebe.	Royal Alfred, 1st Commission.	Royal Alfred, 2nd Commission.	Royalist.	Terror.	Vestal.	TOTAL.
VIII. Diseases of the Digestive System :																	
Dyspepsia - - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Diarrhoea - - - -	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Hernia - - - -	-	-	-	3	-	-	-	-	-	1	-	-	-	-	1	-	5
Diseases of the Liver, &c. -	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	3
IX. & X. Diseases of the Urinary and Generative Systems :																	
Disease of the Kidneys -	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Stricture - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
XII. & XIII. Diseases of Cellular Tissue and Cutaneous System :																	
Phlegmon and Abscess -	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	4
Ulcer - - - -	1	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	5
Unclassed :																	
Debility - - - -	1	-	-	9	1	-	1	-	-	4	-	-	-	-	-	2	18
Wounds and Injuries :																	
Wounds - - - -	-	-	1	4	1	-	-	-	1	-	-	1	-	2	-	-	10
TOTAL - - -	10	1	3	29	8	4	8	5	4	7	8	5	7	6	10	5	120

TABLE, No. 4. - - - - -

SHOWING the Number of DEATHS in each Ship employed - - -

CAUSE OF DEATH.	Aboukir.	Barracouta.	Defence.	Doria.	Eclipse.
I. General Diseases, Section A.:					
Small-pox] - - - - -	-	-	1	-	-
Simple Continued Fever - - - - -	-	-	-	-	-
Yellow Fever - - - - -	7	4	17	-	2
Remittent Fever - - - - -	-	-	-	-	-
Pyæmia - - - - -	-	-	-	-	-
II. General Diseases, Section B.:					
Phthisis - - - - -	-	-	-	1	-
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - - -	-	-	-	-	-
IV. Diseases of the Circulatory System:					
Disease of the Heart, Organic - - -	-	-	-	1	-
VII. Diseases of the Respiratory System:					
Diseases of the Lungs - - - - -	-	-	1	-	-
Unclassed:					
Debility - - - - -	-	-	2	-	-
Wounds and Injuries:					
Wounds, &c. - - - - -	-	-	1	1	-
Submersion and Drowning - - - - -	-	1	-	-	1
Not stated - - - - -	-	-	-	-	-
TOTAL - - -	7	5	22	3	3

- - - - - TABLE, No. 4.

- - - on the NORTH AMERICAN AND WEST INDIAN STATION.

Favorite.	Gunboats.	Jason.	Niobe.	Philomel.	Royal Alfred (First Commission).	Royal Alfred (Second Commission).	Royalist.	Terror.	Vestal.	Total.
-	-	-	-	-	-	-	-	-	-	1
2	5	-	4	5	-	-	-	-	-	4
-	-	-	-	1	-	-	-	2	4	48
-	-	-	-	-	1	-	1	-	1	2
-	1	-	-	-	-	-	-	-	1	3
-	-	-	-	-	-	1	-	-	-	1
-	-	-	-	1	-	-	-	-	-	2
-	-	1	-	1	-	1	-	-	-	4
-	-	-	-	-	-	-	-	-	-	2
-	1	-	1	-	-	-	-	-	-	3
-	1	1	-	-	-	1	1	2	-	9
-	-	-	-	-	-	-	-	-	-	1
2	8	2	6	8	1	3	2	4	6	82

TABLE, No. 5. - - - - -
 SHOWING the Number of CASES of all DISEASES and INJURIES in the - -

DISEASE or INJURY.	Aboutir.	Barracouta.	Dart.	Defence.	Doris.	Eclipse.
I. General Diseases, Section A.:						
Small-pox - - - -	-	-	-	1	-	-
Measles - - - -	-	-	-	-	-	-
Simple Continued Fever -	301	9	8	12	11	10
Yellow Fever - - - -	17	6	-	29	-	9
Ague - - - -	3	1	1	4	-	2
Remittent Fever - - - -	8	-	3	-	-	4
Cholera - - - -	1	-	-	-	-	-
Erysipelas - - - -	-	3	-	2	-	-
Pyæmia - - - -	-	-	-	-	-	-
II. General Diseases, Section B.:						
Rheumatism - - - -	49	3	1	16	17	14
Gout - - - -	-	-	-	-	-	-
Syphilis { Primary - - - -	9	4	8	6	3	5
{ Secondary - - - -	5	2	6	-	2	3
Scrofula - - - -	-	-	-	1	-	1
Phthisis Pulmonalis - -	1	-	1	-	1	-
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - -	-	-	-	-	-	-
Sunstroke - - - -	-	-	1	10	-	-
Paralysis - - - -	-	-	-	-	-	-
Vertigo - - - -	4	-	-	1	-	-
Epilepsy - - - -	1	-	-	3	-	-
Neuralgia - - - -	1	2	5	-	-	-
Insanity - - - -	2	-	-	-	-	1
Diseases of the Nervous System (a)	2	-	-	-	-	-
Diseases of the Eye - -	5	-	-	2	-	-
Diseases of the Ear - -	4	1	-	2	-	-
Diseases of the Nose - -	-	-	1	-	-	-
IV. Diseases of the Circulatory System:						
Disease of the { Functional -	7	1	-	-	-	1
{ Organic - -	1	-	-	-	2	-
Aneurism - - - -	-	-	-	-	-	-
Varicose Veins - - - -	2	-	-	4	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (Symp.) - - - -	4	1	2	14	2	2
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	-	-	-	-	-	-
Catarrh - - - -	22	10	4	2	10	19
Hæmoptysis - - - -	1	-	-	-	2	-
Asthma - - - -	-	-	-	-	-	-
Other Diseases of the Lungs -	11	4	-	7	-	1

(a) Hypochondriasis.

TABLE, No. 5.

Ships employed on the NORTH AMERICAN and WEST INDIAN Station.

Favorite.	Jason.	Mullet.	Niobe.	Philomel.	Phebe.	Royal Alfred (First Commission.)	Royal Alfred (Second Commission.)	Royalist.	Terror.	Vestal.	Total.
-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	4	-	1	-	-	5
11	16	8	13	39	3	-	-	10	42	23	511
2	2	-	-	7	-	-	-	-	2	26	100
-	5	-	-	-	-	-	2	-	-	8	26
3	1	-	-	6	-	-	-	-	-	1	28
-	-	-	-	-	-	-	-	-	-	-	1
-	-	1	-	-	-	-	2	-	2	-	12
-	-	-	-	-	-	1	-	-	-	-	1
34	10	7	36	6	7	16	18	7	16	21	278
-	-	-	1	-	-	-	-	-	-	-	1
10	21	7	8	5	9	6	2	1	4	15	123
5	23	4	-	-	16	12	4	-	2	-	84
-	-	-	-	-	-	-	-	-	-	-	2
2	3	-	-	-	1	2	1	1	3	-	16
-	-	-	-	-	-	-	1	-	-	-	1
-	-	-	-	3	-	-	1	-	-	-	15
-	-	-	-	-	-	-	1	-	-	-	1
-	-	-	-	-	-	-	-	2	-	3	10
1	-	-	1	2	1	-	1	1	2	-	13
-	-	-	1	-	-	-	1	-	1	4	15
-	-	-	-	-	1	-	-	-	3	-	7
-	-	-	-	1	-	-	1	-	-	-	4
3	5	-	1	-	6	1	2	2	3	1	31
-	-	1	-	-	-	2	1	-	2	-	13
-	-	-	-	-	-	-	-	-	-	-	1
-	4	-	3	-	1	-	2	2	7	1	29
-	-	1	-	-	-	1	1	-	-	-	6
-	-	-	-	-	-	1	-	-	-	-	1
1	1	-	-	-	-	1	-	1	-	-	10
3	10	3	5	2	-	-	-	2	13	2	65
-	-	-	-	-	-	1	-	-	-	-	1
40	13	1	64	11	12	42	22	28	61	47	408
1	-	-	-	-	-	-	1	-	-	1	6
-	-	-	-	-	-	3	-	-	-	-	3
4	2	-	4	2	-	7	5	-	8	2	57

TABLE, No. 5.—Showing the Number of Cases of all Diseases and Injuries

DISEASE or INJURY.	Aboukir.	Barracouta.	Dart.	Defence.	Doris.	Eclipse.
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	3	4	4	15	4	-
Diseases of Mouth, Teeth, &c.	-	-	-	-	1	-
Dyspepsia - - - - -	17	5	2	84	6	16
Dysentery - - - - -	3	-	-	-	-	-
Diarrhoea - - - - -	16	6	22	19	3	12
Colic and Constipation - -	4	4	2	7	1	3
Hæmorrhoids - - - - -	2	1	-	-	-	1
Hernia - - - - -	2	1	-	4	-	-
Worms - - - - -	-	-	-	1	-	-
Other Diseases of the Stomach, } Intestines, &c. - - - - }	1	1	-	4	-	-
Diseases of the Liver, Spleen, &c.	-	-	-	2	-	2
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	-	-	-	1	-	-
Diseases of the Bladder - -	-	-	-	-	1	-
Gonorrhoea - - - - -	22	7	4	20	-	1
Diseases of the Organs of Ge- } neration - - - - - }	1	-	-	-	-	-
Stricture - - - - -	1	1	-	-	-	-
Orchitis - - - - -	3	4	1	6	6	1
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones - -	1	1	-	2	-	-
Diseases of the Joints - -	-	-	-	-	-	-
Diseases of the Bursæ - -	1	1	-	-	1	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	61	29	12	233	38	56
Ulcer - - - - -	44	15	5	24	9	8
Erythema - - - - -	-	-	1	-	-	-
Diseases of the Skin - -	13	-	-	-	2	5
Scabies - - - - -	-	-	-	-	-	-
Unclassed:						
Debility - - - - -	18	6	1	10	2	5
Delirium Tremens - - -	-	1	-	1	1	-
Poisoning - - - - -	(b) 1	-	-	-	-	-
Wounds and Injuries:						
Wounds, &c. - - - - -	74	36	9	115	26	37
Burns and Scalds - - -	2	2	1	8	1	-
Submersion and Drowning -	-	1	-	-	-	1
TOTAL - - -	751	173	105	672	152	221

(b) By alcohol.

in the Ships employed on the North American and West Indian Station—*continued.*

Favorite.	Jason.	Mullet.	Niobe.	Philomel.	Phebe.	Royal Alfred (First Commission)	Royal Alfred (Second Commission)	Royalist.	Terror.	Vestal.	Total.
1	1	3	23	1	9	21	23	6	19	7	144
—	—	—	—	—	—	—	—	—	—	—	1
9	13	7	8	—	2	6	5	9	5	23	217
—	—	—	—	—	1	—	—	2	25	—	31
11	23	8	12	9	6	8	15	7	59	29	265
8	—	3	4	6	2	2	—	—	2	6	54
—	—	—	1	—	—	5	—	—	—	2	12
—	—	—	—	1	1	—	—	—	1	—	10
—	—	—	—	—	—	3	1	2	1	—	8
—	—	—	—	—	—	1	—	1	—	2	10
—	—	1	—	—	1	1	—	—	—	—	7
—	—	—	—	—	—	—	—	—	—	—	—
—	3	—	—	—	2	—	—	1	—	2	9
—	—	—	—	—	2	—	—	—	—	—	3
5	—	2	9	2	9	20	9	5	—	8	123
—	—	—	—	—	—	—	—	2	1	—	4
—	—	—	1	—	—	2	—	1	2	—	8
2	4	1	3	1	2	7	4	1	4	7	57
—	—	—	—	—	—	—	—	—	—	—	—
—	1	—	—	—	—	—	1	—	—	1	7
—	—	1	—	—	—	—	—	1	—	—	2
—	1	—	—	—	—	—	—	3	—	—	8
—	—	—	—	—	—	—	—	—	—	—	—
40	70	34	36	51	11	75	41	48	44	61	949
22	23	8	17	3	6	21	16	28	26	35	310
—	—	—	—	—	—	—	1	—	—	—	2
1	2	3	—	—	—	5	4	6	3	4	48
—	—	—	—	—	—	—	1	1	—	—	2
—	—	—	—	—	—	—	—	—	—	—	—
6	11	—	—	13	—	—	1	3	6	21	103
—	—	—	—	—	—	—	—	—	2	—	5
—	—	—	—	—	—	(c) 1	—	—	—	—	2
—	—	—	—	—	—	—	—	—	—	—	—
38	39	29	56	38	36	113	56	79	56	51	888
—	—	3	2	6	—	1	1	—	—	2	29
1	1	—	1	—	—	—	—	1	2	—	8
273	308	131	310	215	147	394	248	265	429	416	5,210

(c) By lead.

N 3

TABLE, No. 6. - - - - -

SHOWING the Names of the SHIPS; the Average Complements, &c.; the Number of Men Sick Daily, in each Ship;

P. O. Paid off.				C. Commissioned.				
Rate, &c.	NAMES of S H I P S.			Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.
Iron Clad - -	Defence - - -	S. C.	Devonport -	18 Jan. 1868	16	3,720	S. 600	
	Favorite - - -	P. O.	Sheerness -	8 Feb. 1866	10	2,094	S. 400	
	Royal Alfred - -	P. O.	Portsmouth	15 Jan. 1867	18	4,068	S. 800	
	Royal Alfred - -	C.	Halifax -	1 Sept. 1869	18	4,068	S. 800	
Fourth Rate -	Doris - - -	P. O.	Devonport -	5 Feb. 1866	24	2,483	S. 800	
	Phœbe - - -	S. C.	Devonport -	6 May 1867	30	2,896	S. 500	
Sixth Rate - -	Eclipse - - -	-	Sheerness -	2 June 1868	6	1,273	S. 350	
	Jason - - -	-	Devonport -	7 May 1866	17	1,711	S. 400	
Sloop - - -	Barracouta - - -	-	Sheerness -	18 March 1866	6	1,053	P. 300	
	Niobe - - -	-	Woolwich -	11 Feb. 1867	4	1,083	S. 300	
	Royalist - - -	-	Woolwich -	14 Jan. 1868	3	669	S. 150	
	Vestal - - -	-	Devonport -	26 Jan. 1867	4	1,081	S. 300	
Gun Vessel - -	Dart - - -	-	Portsmouth	27 Aug. 1866	5	428	S. 80	
	Mullet - - -	-	Sheerness -	5 May 1866	5	430	S. 80	
	Philomel - - -	-	Woolwich -	21 April 1868	3	664	S. 160	
Receiving Ship -	Aboukir - - -	-	Jamaica -	1 April 1867	86	3,091	S. 400	
Floating Battery and Dockyard -	Terror - - -	-	Bermuda -	1 Jan. 1868	16	1,971	S. 200	

- - - - - TABLE, No. 6.

Cases; the Total Number of Days' Sickness on Board; the Average Number of and the Number Discharged to Hospital.

S. C. Station changed.

Period.	Average Com- plements.	Average Com- plements corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
1 April to 31 Dec.	445	335	672	4,959	13·5	40·2	88
1 Jan. to 25 Aug.	265	165	273	3,219	8·8	53·3	12
1 Jan. to 31 Aug.	660	440	394	5,126	14·	31·8	8
1 Sept. to 31 Dec.	770	255	248	2,462	6·7	26·2	7
1 Jan. to 16 June	500	230	152	1,253	3·4	14·7	7
1 Jan. to 30 June	545	270	147	2,729	7·4	27·4	3
Year - -	185	185	221	2,166	5·9	31·8	9
Year - -	260	260	308	3,315	9·	34·6	4
Year - -	190	190	173	1,869	5·1	26·8	20
Year - -	155	155	310	1,934	5·2	33·5	24
Year - -	125	125	265	2,829	7·7	61·6	9
Year - -	155	155	416	3,743	10·2	65·8	26
Year - -	65	65	105	904	2·4	36·9	14
Year - -	65	65	131	1,057	2·8	43·	7
Year - -	80	80	215	2,058	5·6	70·	19
Year - -	195	195	751	5,637	15·4	78·9	162
Year - -	330	330	429	2,253	6·1	18·4	128

SOUTH EAST COAST OF AMERICA STATION.

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THE squadron on the South East Coast of America, during the year 1869, comprised eleven vessels, viz., one fourth-rate; one sixth-rate; one sloop; three gun-vessels; two steam vessels; two gunboats; and one receiving ship permanently stationed at Rio de Janeiro. There was also a small detachment of marines at the Falkland Islands. The Returns from four of these vessels and from the Marine detachment are for the whole year, and from the remainder of the vessels for periods varying from three to eight months. The mean force corrected for time was 930, and the total number of cases of disease and injury entered on the sick-list 1,402, which is in the ratio of 1507·5 per 1,000, being a decrease compared with the preceding year equal to 11·9 per 1,000. Of these nineteen were invalided and twenty died, the former being in the ratio of 20·4, and the latter of 21·5 per 1,000. The invaliding rate is almost precisely the same as that of the previous twelve months, but there is an increase in the death-rate to the extent of 6· per 1,000.

The average daily loss of service from General Diseases, Section A., or Febrile Group, was in the ratio of 5·7 per 1,000; from Section B., or Constitutional Group, 3·7; from diseases of the nervous system and organs of the special senses, ·7; of the circulatory system, ·3; of the absorbent system and ductless glands, ·4; of the respiratory system, 3·7; of the digestive system, 6·1; of the urinary and generative systems, ·7; of the organs of locomotion, ·3; of the cellular tissue and cutaneous system, 8·6; from unclassified diseases, ·5; and from wounds and injuries of various kinds, 9·4. The average number of men sick daily was forty-one, which is in the ratio of 44· per 1,000 of force, being a reduction compared with the preceding year equal to 8·1 per 1,000.

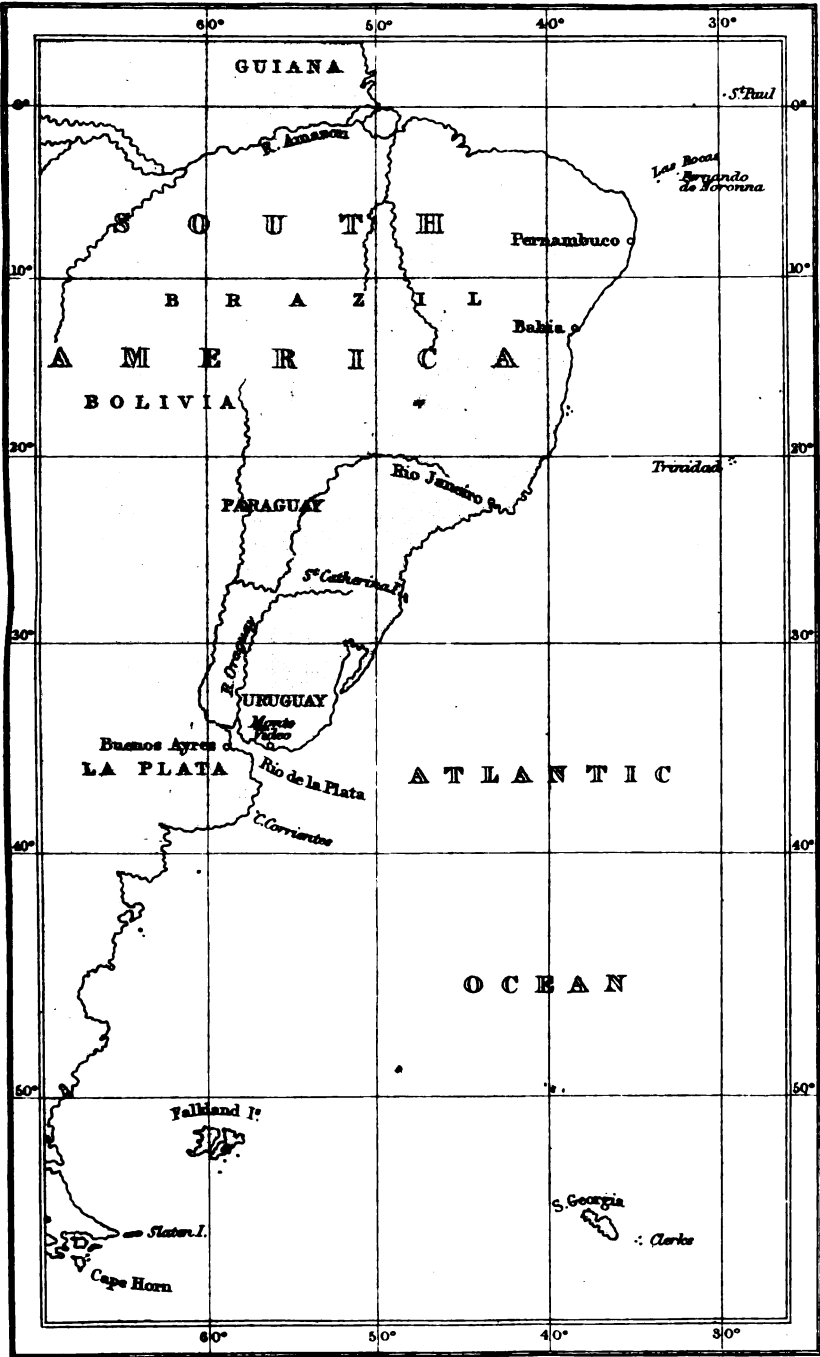
I. General Diseases.—Section A., or Febrile Group.

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Under this head 203 cases of various forms of febrile disease were entered on the sick-list, viz., six of typhus fever; three of enteric fever; seventy-eight of simple continued fever; six of yellow fever; sixty-eight of ague; forty of remittent fever: one of cholera, and one of influenza. Of these, both cases of typhus fever, two of enteric fever, four of yellow fever, and the case of cholera, proved fatal.

Typhus Fever.—All the cases of this form of fever occurred in the Nassau. It is doubtful whether the disease was, however, true
typhus

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typhus fever. The surgeon* of the vessel says, that during their stay at Rio de Janeiro, where they had arrived from the Straits of Magellan, on the 20th of May. "Six cases of continued fever of a very virulent type occurred among the men, two of which ended fatally after six days' illness. Of the six cases four occurred among the marines. The first case was entered on the 2nd of June. The patient, a marine, stated that he was seized suddenly with violent headache and pain in the back and loins whilst engaged in drawing provisions from Her Majesty's ship Egmont. He had been a good deal exposed to the sun. Next day another marine and an ordinary seaman were put on the list. Both these ended fatally. They had been on leave on shore a few days before. On the 7th another case occurred in an able seaman who had been out of the ship. The ship sailed from Rio on the 9th, and on the 10th and 12th respectively two marines were entered on the list. Both these had contracted the disease before the ship sailed. No fresh cases occurred after this date.

"Though I have entered these as cases of typhus fever, the disease was of a peculiar type, and only in one case was there any eruption observed. In most cases violent headache and pain in the back and loins were the first symptoms complained of, followed rapidly by great prostration in the cases that ended fatally. In one case there was irritability of the stomach and vomiting of bilious matter before death. The patients generally retained consciousness to the last, though there was often low delirium at night. The favourable cases made a good recovery after the average of thirty days on the sick-list.

"All the cases were treated on board, as they would not be received on board the hospital ship Egmont, and there was no suitable place on shore. They were screened off under the topgallant fore-castle on deck, and separated from the rest of the ship's company.

"I am of opinion that the infection was introduced by the men who had been on leave on shore at Rio, where the disease prevailed to a considerable extent, as one of these men was ill for two days before he presented himself."

In the only one of these cases which showed any eruption it was merely a slight red efflorescence on the forehead and neck, and does not appear to have been in any way characteristic of true typhus.

Enteric Fever.—Three cases of this form of fever appeared in the squadron; one in the Beacon, one in the Cracker, and one in the Narcissus. Of these the case in the Cracker, and that in the Narcissus, proved fatal.

In the Beacon the case of enteric fever occurred at Asuncion, in the person of a boy who was in daily communication with the shore for some time previous to admission. The attack was a slight one, no eruption was observed, but the type of fever was decidedly enteric. He was twenty-three days on the sick-list.

The

* Surgeon Samuel Campbell, M.D.

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The medical officer* of the vessel observes:—"Enteric fever does not seem to have been endemic in the Paraguay, but to have made its appearance with the Brazilians. There can be no doubt that once generated in the Brazilian camp, all the conditions favourable to its extension were present. At Asuncion, as at Palma (where we were stationed in 1868), there was a complete neglect of all sanitary precautions. Animal refuse of every description was allowed to collect in and about the town; so that after the place had been occupied about a month or two by the army, it might be said to be a collection of concentrated impurities."

The case of enteric fever in the Cracker occurred in the person of an ordinary seaman who had suffered when in Paraguay from the diarrhoea so prevalent on board, having been on the sick-list from the 25th to the 31st of January, and again from the 20th to the 24th of February. It subsequently transpired that, although continuing to do duty and making no complaint, he did not regain much strength after the last attack, despite the improved climate of Monte Video, and the superior food attainable. He was again placed on the sick-list on the 5th of March, stating that in the two previous evenings he had suffered from cold chills subsequent to fever, irritability of stomach, and colicky diarrhoea during the day. He had, nevertheless, made no complaint, and on the evening of the 4th had pulled in from the outer to the inner anchorage at Monte Video, getting wet through owing to the heavy sea at the time. The medical officer† says:— "he was a quiet, reserved, zealous man, unwilling to complain on account of the heavy sick-list at the time on board." On the 8th the tongue was very red, fissured, and dry; the skin was hot, the pulse 100, small and weak; there was slight uneasiness on pressure over the right iliac fossa, and some suspicious rose-coloured spots about the abdomen. In the evening he had had four stools "pea soup" in appearance; there was less fever, and the skin was active, but he had a troublesome tearing cough. On the 9th the report was "Delirious during night, answers questions unsatisfactorily; when left alone mutters to himself; he has a fevered dusky appearance; no action of bowels during the night; tongue clean, bright red, dry and fissured; pulse 100, very weak; skin hot and pungent; some uneasiness, with gurgling, on pressure over right ileo cæcal valve. Troublesome cough; viscid rusty sputum; defective respiration over base of right lung posteriorly, with crepitation and dulness in percussion."

The case being one of undoubted enteric fever, with intercurrent pneumonia, he was at once removed to sick quarters at Monte Video, where he died on the 18th of March.

On post-mortem examination of the body "there were several characteristic patches of ulceration situated principally at the lower end of the small intestine; the mesenteric glands were enlarged; there was no perforation; the spleen was large and friable. There

was

* Assistant Surgeon J. T. Comerford, M.D.

† Assistant Surgeon Alexander Turnbull, M.D.

was general congestion of both lungs, posteriorly, with hepatization of their bases, most extensive on the right side.

"No other case occurred among the crew, nor was this fever prevalent on shore. In that case, as well as in all cases of dysentery and diarrhoea, great care was taken to have all the discharges mixed with a solution of carbolic acid, with which all the utensils and waterclosets were frequently cleaned."

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The third fatal case of enteric fever occurred in the person of a non-commissioned officer of Marines, of the *Narcissus*. He was placed on the sick-list on the 8th of May, the vessel being then at sea, five days from Rio de Janeiro, bound for England. He had been on shore at Rio on the 25th of April for ten hours. Fever was prevalent on shore at the time, and several deaths from yellow fever had been reported.

When he presented himself he complained of headache, rigors, pain in the back and extremities, general debility, and complete anorexia; in fact, he had the ordinary symptoms of simple continued fever, which was prevalent in the ship at the time. His symptoms gradually became aggravated, without, however, presenting the characteristic features of enteric fever. There was no abdominal tenderness, and no eruption, and although diarrhoea was prevalent, the stools were not typical of enteric fever. He died on the 20th day, and the post-mortem examination of the body showed the pathognomonic lesions of the disease. The intestinal mucous membrane generally was much congested and of a dark colour, and Peyer's patches were deeply ulcerated, especially at the lower part of the ileum. The ulcers had thickened edges, with sloughy centres, and were, some of them, as large as a florin.

Simple Continued Fever.—Seventy-eight cases of simple continued fever occurred in the squadron, the vessels in which they prevailed most being the *Cracker*, the *Egmont*, the *Greyhound*, and the *Narcissus*. Some of them appear to have been of considerable severity. The average duration of each case was about ten days, but many ran a much longer course. In the *Narcissus* the average duration of each case was twenty-three days, and one case in the *Cracker*, which the medical officer says might more properly have been classed as enteric, was thirty-eight days under treatment.

Yellow Fever.—Six cases of this fatal form of fever were entered on the sick-list. They all occurred in the *Egmont*, the stationary receiving ship at Rio de Janeiro, and of the six, four proved fatal.

The surgeon* of the *Egmont* has furnished the following report on the outbreak of yellow fever at Rio de Janeiro in 1869, and on the cases on board that vessel. "Yellow fever made its appearance amongst the merchant shipping at Rio early in April 1869, but through what means it was imported I am unable to say, although I have

* Surgeon Thomas M'Carthy.

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I have taken every means in my power to ascertain. A very general feeling appeared to prevail at Rio that it had been brought there by an Italian merchant ship named *Creola del Plata*, which arrived with passengers from Buenos Ayres. She had originally cleared from Genoa, and having remained for about thirty days at Porto Praya, in Santiago, one of the Cape de Verd Islands, which was free from fever, arrived at Rio on the 23rd of March. There had been sickness on board, and 120 of the passengers continued the voyage in one of the London, Belgian, and Brazilian steamers, which sailed on the 26th or 27th of March. On the 9th of April the sailors complained to the Italian Consul that they were all sick with 'vomits.' The same day a passenger who had been removed to a hotel on shore, died; and on the same day the mate, on being removed to the Misericordia Hospital, died on entering the hospital. A request was sent to the Italian Consulate for permission to make a post-mortem examination of the body, in order to ascertain if the disease was yellow fever or not. The examination was made, but decided nothing. Three more sailors and one more passenger also died, but only one on board the ship. With the exception of the master, two boys of fifteen years of age, and one sailor, the whole of the crew of nineteen persons, and three passengers were attacked, and of these, six died.

"As before mentioned, the idea prevailed very generally that this ship brought the disease to Rio, but it is evident that she was only the ship on board of which the fever was observed or detected first. No ship during the year was placed in quarantine. No yellow flag was at any time hoisted by a merchant ship in the harbour, for if it had, it would have been immediately observed on board the Egmont. May not the admission to pratique of the ship that imported the disease have been the means of communicating it to the merchant vessels immediately surrounding her, and from whom it then gradually spread?

"From this time cases continued to occur on board the merchant shipping, but not very numerously. As they occurred they were at once removed to the Government Hospital devoted to the reception of infectious diseases, none being allowed to remain on board, but no quarantine was at any time established. The disease, however, did not spread on shore to any extent, nor appear to create any alarm in the city amongst the inhabitants, nor have I been able to discover any instance where it attacked any of the attendants on the sick.

"The proportion of deaths to recoveries was about one to three, or one to four, varying somewhat, and being rather higher in those cases treated in the Government Hospital than in those treated in private ones; the only reason for which, I conceive to have been, that the patients had a great dread of going to the public hospital, being impressed with a sense of fear that they would not recover there, which induced a state of despondency unfavourable to recovery, an unfounded fear, for the hospital was well ventilated, beautifully clean, and nothing could exceed the kindness of the sisters of mercy who act as nurses to the sick. The disease has all along, with but few

few exceptions, been confined to sea-faring men, Norwegians, Danes, English, Germans, a few French, and Portuguese. It principally attacked persons between the ages of fifteen and thirty-five.

"Scarcely any females were attacked, but an English medical man in practice in the city, told me that he had attended one woman, and that he knew of another that was seized with the disease. They were married, pregnant, and both died. The symptoms generally consisted of frontal headache, great pains or throbbing of the eyeballs, which frequently presented a suffused appearance, pain across the small of the back and in the thighs, and a sense of general discomfort; rigors followed by fever of an ardent type, usually in the young, and generally aggravated towards night; great thirst, cold water being generally preferred to any other drink; nausea and epigastric tenderness when emetics had been administered, in the beginning more especially. The urine was always deep coloured, and of high specific gravity, and in bad cases nearly always albuminous. There was great general restlessness, but the countenance did not usually denote mental anxiety, but rather apathy. There was seldom much delirium, except in bad cases, and then usually of a low muttering character, but I saw one or two cases in which there was some difficulty in inducing the patient to remain in bed. The appearance of yellowness of the surface varied much, sometimes not showing until after death; in other cases a lemon hue of skin over the forehead, and of the eyes could be seen on the second or third day; sometimes more or less general discoloration of the whole surface of the body. The tongue, at first covered with a brown or white coat, became after the fifth or sixth day red about the edges, and sometimes dry. In bad cases ecchymosis formed on the eyelids, and petechiæ on the neck, back, abdomen, and shins. Occasionally blood would be detected in the urine, and in all fatal cases suppression of that secretion occurred towards the end.

"Black vomit generally came on about the third or fourth day, sometimes not until the sixth or seventh, and I saw one fatal case in which it suddenly appeared on the eleventh, and when the patient appeared convalescent about half an hour before it set in. It was always at first of a coffee-ground appearance, sometimes assuming gradually the consistence of tar or treacle. Occasionally the stools assumed this character, and in two cases on board the Egmont a large quantity of it was passed per anum after death. The tendency to death was generally by syncope, but occasionally death was preceded by convulsions. The duration of the disease was usually from four to twelve days, and in favourable cases frequently an eruption of boils formed towards the termination. The stools were never found free from bile, and the bowels, in those cases which I had an opportunity of watching, were invariably loose throughout.

After some observations on treatment, in which nothing novel appears, he continues: "General bleeding was never employed, and leeches, which at the commencement of the epidemic were used whenever a suffused condition of the countenance or the presence of head symptoms indicated them, had to be given up, on account of the great difficulty experienced in staunching the bleeding from
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the bites. Turpentine in small doses was sometimes given and found useful. Fomentations, turpentine stupes, sinapisms, cold applications, ice, &c., were all employed according as their use was indicated.

As to the effect the administration of medicine had on the progress or termination of the disease, the opportunities I had of forming an opinion were too few to enable me to judge. The worst cases hurried on to a fatal issue quite uninfluenced by any treatment. In the milder ones, I believe the use of quinine to have been most beneficial, after the liver had been unloaded and free action of the bowels set up by the use of mercurial and saline purgatives.

The first two cases which appeared in the Egmont were in the persons of a marine and a mess servant, one of whom was placed on the sick-list on the 20th of July, and died on the 28th, vomiting latterly from time to time small quantities of nearly black vomit of about the consistence of treacle and of a very offensive smell. This man had been on shore on leave on the 12th for about four hours in the afternoon, coming on board sober before sunset. It was not ascertained where he had gone to whilst on shore. He had only recently joined the ship from England.

The next case occurred in the mess servant. He was placed on the sick-list on the 30th of July. His duties frequently took him on shore. His case did not appear to be an urgent one on board ship, but as some yellowness of the skin and conjunctiva appeared on the 2nd of August, it was thought better for the safety of the ship's company to remove him to the fever hospital, which was accordingly done. There he progressed most favourably, and on the evening of the 13th or 14th the surgeon on visiting him congratulated him on the great improvement which had taken place in his case. He was very cheerful and wished much to be allowed to walk in the garden, which he had been promised he should in a few days. The surgeon had scarcely left the hospital, when black vomit suddenly came on; lasted during the night, and in the morning he died. He was a strong, florid, healthy young man who had been for some time on the station.

No other cases occurred on board the Egmont until the middle of December, the health of the ship's company during the interval being comparatively good. The surgeon continues "The fever amongst the shipping had considerably decreased, and the proportion of deaths was much less. On the 4th of December the Egmont was hauled into the Imperial Dock for the purpose of having a very serious leak in her bows, under water, repaired, which it was necessary to have done as soon as possible, as the constant working at the pumps twice daily, for the purpose of keeping her free, was trying very heavily the strength of a very small ship's company, only about ninety men (the Egmont being a two-decker), most of whom had other heavy duties to perform in hoisting in and out stores. It was expected that she would only have been a couple of days in dock, but was unavoidably detained for eight days. The dock is close and hot, being excavated from the solid rock of Cobras, having

having a northern aspect, and being consequently deprived, to a great degree, of the benefit of the sea-breeze. The health of the ship's company remained good. Whilst there, quinine in four-grain doses, in port wine, was issued morning and evening, and continued for a fortnight after leaving. Extra issues of rum, lime-juice, and cocoa were served out daily. The weather was exceptionally cool for the season in which the ship was in the dock, which was flooded every night; nevertheless, a disagreeable smell was perceived by many, chiefly at night. There being no one on the sick-list at the time, most of the ship's company were berthed in the sick bay, which is situated beneath the top-gallant forecastle, and is spacious, airy, and splendidly ventilated. The ship was hauled out into the stream on the 12th."

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On the 15th an able seaman presented himself, complaining of frontal headache, which he ascribed to exposure to the sun during the day, whilst employed alongside the landing-place, waiting for stores. Febrile symptoms of some severity set in, but there was no vomiting until the afternoon of the 18th, when he vomited four times, the matters ejected being black. Suppression of urine took place during the night. Black vomit continued at intervals, and on the morning of the 19th he died, the skin and conjunctivæ having assumed a faint yellow hue.

Following this case, three others occurred, one on the 17th, one on the 18th, and the last on the 20th. The two former made good recoveries, although in one there was much restless and noisy delirium, but the last case proved fatal. It occurred in a young officer of a delicate habit of body, who had recently joined the ship. He died on the 23rd, death being preceded by copious black vomiting, and by suppression of urine. In none of these cases is any reference made to the urine being albuminous or otherwise, from which it may be presumed that it was not tested.

Referring to the cases of yellow fever which occurred in the Egmont, the medical officer of the Cracker makes the following observations: "Shortly after our arrival at Rio, viz., on the 19th and 23rd of December, two cases of yellow fever terminated fatally on board the Egmont. The ship had been placed in dock on Cobras Island on the 4th, and removed to an anchorage alongside Euchadas Island on the 18th, the ship's company unfortunately being retained on board in this the hot and rainy season. Prior to her entry into dock, a party of men from Her Majesty's ship *Pylades* had been berthed on board the Egmont, assisting to clear her. They returned to their own ship on the Egmont being docked, and no sickness occurred amongst them. The cases of yellow fever on board the Egmont, four in all, were entered on the sick-list either in the dock or within three days of her leaving it, after which no fresh case was entered before the end of the year. At the time, I considered the fever resembled the outbreak on board Her Majesty's ship *Bristol*, in January 1866, viz., a fever with all the recognised symptoms of specific yellow fever, including albuminous urine, and suppression of urine; but at the same time not contagious, and nothing subsequently

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quently arose during our stay in Rio to alter my opinion. The fever was apparently due to local causes arising in or near the dock on Cobras Island. I say near, because the shipping in the inner harbour suffered severely from the same fever at the same time; more severely, I was informed, than had been the case for ten years past, while the shipping in the outer harbour were exempt, and very few cases were reported in the city.

“On making inquiries among the medical men on shore, I found they did not consider the fever contagious. They anticipated, however, that it would increase, and probably become epidemic during the intensely hot and unhealthy months of February and March. They attributed the present outbreak to the great heat of the weather, associated as it was with much rain, and damp sultry weather, and all condemned the inner harbour as an anchorage at this season, and under existing circumstances. They considered the fever to be of a malarious type.

“The immunity from sickness enjoyed by the crew of the *Pyldes* employed on board the *Egmont* prior to her entry into the dock, the sudden apparent arrest of the disease on board the *Egmont* on her leaving the dock, and moving to a comparatively better position in the inner harbour, the exemption from the disease enjoyed by all those in constant attendance on the sick, although not protected by a previous attack, were the chief grounds for my considering the disease of a malarious and non-contagious character, and due to local miasmata arising in or near the dock.

“I nevertheless considered it my duty to represent to the commander of this vessel that it was desirable to prepare for sea with all dispatch, so that should the disease appear on board, we might be ready to leave Rio at once. When in the following month, viz., January 1870, two fresh cases arose on board the *Egmont*, then at anchor in the inner harbour, alongside *Euchados* Island, chiefly used as a coal depôt, one of which cases terminated fatally, with black vomit, &c., on the 18th; although I saw no reason to alter my views as to the nature of the fever, I represented to the commanding officer that many more experienced medical men considered the disease was contagious, and as we had been in constant communication with Her Majesty's ship *Egmont*, receiving men and stores, and obliged to send working parties to her even on the 18th, I considered it advisable to quit Rio at the earliest possible opportunity. We consequently left on the morning of the 19th with a clear sick-list. The true nature of the fever on board the *Egmont* cannot be determined at present.”

These sound and practical observations are very much to the purpose, and it reflects great credit on this officer that he did not allow the theory he had assumed to be correct, to influence his judgment, but giving the benefit of the doubt to the ship's company under his medical charge, counselled a prompt retreat from the presence of an enemy whose invasion is always attended with disastrous results.

Ague.

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Ague.—Sixty-eight cases of intermittent fever were entered on the sick-list during the year, of which fifty-six occurred on board the Beacon, and were attributable to the malarious influences of the River Paraguay. The medical officer says: "Fifty-six cases of ague occurred. Of these, forty-five were added at Asuncion, and eleven afterwards. Those latter, however, all occurred in subjects who had previously suffered from the disease at Asuncion. All were mild cases of the quotidian type, with the intermissions distinctly marked; most suffered from only one or two paroxysms, but one tedious case from five. The men were kept on the list, and quinine continued to be given for three or four days after the paroxysm ceased. Average time on sick-list 5.5 days. In one case which was invalided, the aguish attack was slight, but seemed to induce, in a weak constitution, such obstinate dyspeptic symptoms, that, although no organic disease was present, it was deemed advisable to invalid him and give him the benefit of a complete change of climate. On our arrival at Asuncion on the 20th of February the river was very low, and consequently large portions of marshy ground were exposed to the sun. About the middle of March the river began to rise, and continued rising until the beginning of May; from which time, till the date of our leaving, it remained stationary.

Between the 1st and 20th of March, ten cases of ague were added; from March the 20th to April the 20th no case occurred; between the latter date and the time of our leaving, the 10th of June, thirty-five were added.

It will be seen that on our first arrival, while the river was low, ten cases occurred; that as soon as the river began to rise, and the low land was covered, no additions were made for a month, and that after the river reached a certain height ague reappeared. The only explanation that occurs to me of the reappearance of the disease, when the swampy land was in great part covered, and the weather getting cooler, is that, as the river continued to rise, the banks got broken down, and the river forcing its way into the Gran Chaco, dislodged large masses of decomposing vegetation, which then floated down with the current.

Those masses (called by the Paraguayans "Camelotes") continued to descend the river from the middle of April until we left. In their course, considerable quantities were brought by the current across the bows of the shipping. The quantity thus accumulated during a day was often sufficient not only to form a large collection about the bow, but to extend aft as far as the gangways, and was of such solidity that the men could walk about on it. It generally occupied the ship's company three or four hours every morning in removing the accumulation of the previous day. The odour arising from these camelotes was very offensive, and I think the fact of our having been for two months almost constantly exposed to their influence accounts for the large number of cases of malarious disease added during that period."

He elsewhere says:—"Quinine was not given as a prophylactic at Paraguay, because the medical men at Buenos Ayres, and also two of the medical officers of the Paraguayan army, with whom I had an opportunity of conversing, gave it as their opinion that such

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proceeding would be useless. Ships ordered up the river ought to provide themselves with an extra allowance of quinine. During the four months we were there, although great care was taken not to waste any, thirteen ounces were used. To preserve the health of the crew while at Asuncion, no general leave was given; condensed water was used for drinking and culinary purposes; care was taken not to expose the men to the sun during the heat of the day; an extra allowance of coffee was served out in the morning, and mosquito curtains were supplied to the men, as without them it would be almost impossible to sleep. I think this last measure prevented a great deal of sickness, not only from the ulcers produced by mosquito-bites, which are always slow in healing, but also from the debility induced by want of sleep. We remained at Monte Video a month after coming down the river. During this time the health of the crew did not appear to improve, and they continued to present a debilitated appearance; we were then sent to cruise outside the mouth of the River Plate. This was attended by a marked improvement, and the health of the ship's company became in great measure re-established."

On the influence of the climate, and the concomitants of the River Paraguay, on the health of our seamen, at the time the Cracker and Beacon were employed at Asuncion, the medical officer of the former vessel observes:—"From our own experience, that of the Beacon, and of the foreign vessels—men of war—serving in Paraguay, it is evident that malaria has much to do in producing, or markedly modifying, the majority of the diseases met with in the River Plate and its tributaries, especially the Paraguay, although I hardly think it does so to such an extent as to justify or call for a regular daily issue of quinine during service in that river. Such was the opinion of the medical men I consulted, who had lengthened experience of service on the banks of the Paraguay, and although at one time I doubted the soundness of their views, further experience has led me to coincide with them. Service in Paraguay, if confined to the cool months, June, July, and August, would not prove very, if at all, injurious to a ship's crew.

"On our first arrival in Paraguay, warned by the experience of others as to the extremely debilitating effects of the climate of Paraguay, more especially during the summer season, great attention was paid to the preservation of the health of the crew; the ill-effects of an exceedingly high temperature, with intense burning sunshine, were guarded against by means of awnings, and cessation from all heavy drills or work not absolutely necessary.

"One terrible source of suffering to the crew, one which none but the actual sufferers can thoroughly appreciate, was the swarms of mosquitos infesting the ship from sunset to sunrise. The men being unprovided with mosquito nets (the only effective protection), passed the greater part of the night in walking the deck unable to rest. Instead of night being welcomed as a period of rest and repose, after exhaustion from the heat and labour of the day, its approach was dreaded, and daylight anxiously looked for as the only termination to their sufferings. The bad effects of such nights upon the sick were very apparent, and it was found necessary to envelope the cots and hammocks in flags. As it was advisable to do

do as much as possible of the absolutely essential work in the early morning and in the evenings, the men were allowed from noon to half-past three in the afternoon for rest. Even this was seriously disturbed by the swarms of flies infesting the ship in the day-time.

"The city of Asuncion was at this time occupied by the Allied Army, consisting of Brazilians, Argentines, and Uruguayans, with a host of sutlers, mule-drivers, &c., in attendance. Owing to a total absence of all sanitary arrangements, the filthy condition of the city and its environs may be more easily imagined than described. Sewage matter of every description was thrown into the streets, or lay exposed in the courts, &c., immediately adjoining. Dead horses, mules, and cattle, lay about in every direction, exposed to the rays of a tropical sun, and carrion crows were the only scavengers. No leave was given to the crew, and the vessel was anchored more than half-a-mile off the Asuncion bank of the river. Much sickness, especially dysentery, dysenteric diarrhoea, and diarrhoea and fever prevailed among the merchant shipping in the river, and the residents on shore.

"The nourishment of the crew was defective. On our arrival no vegetables could be procured; and the flesh of over-driven cattle being the only fresh meat to be had, the ordinary sea rations, with lime-juice, were issued in preference until towards the end of January; vegetables were then obtained, as well as somewhat better beef, which were subsequently served out. Owing to the very exorbitant price of vegetables, and of supplies of all kinds, the men were unable to supplement their service ration of inferior fresh beef and vegetables, which, poor as it was, seemed preferable to the salt meat ration. As the service ration of vegetables, half a pound minus all waste, when unassisted by private supplies, appeared to me, as it always has done, so very inadequate, lime-juice was continued as an issue, during our service in Paraguay. The biscuit was much deteriorated by climate, though of this the men made no complaint. The men were always provided on turning out of a morning, either with an extra allowance of cocoa or their breakfast.

"From the above it will be seen that the crew were exposed to all the ill-effects of an intense tropical climate, in a fresh-water river, far inland, surrounded by vast tracts of flooded and recently flooded marshy lands, rapidly drying up, and their strength seriously impaired by want of sleep and defective food. Under these circumstances, it can hardly be a matter of surprise that much sickness resulted, which, in itself, had a dispiriting effect upon the men, aggravated as it was by the monotonous uninteresting nature of the service on which they were employed, and the uncertainty as to how long that service would last.

"At the commencement of the year, and until the 12th of January, no sickness of any consequence occurred on board. Then three cases of sunstroke occurred, and the sick-list rose rapidly, the cases being those of dysentery, diarrhoea, remittent fever, &c. On the 24th of January a mild, though distinct, case of quotidian ague was entered. The man had suffered formerly from dysentery in China, but never before from ague. Some difficulty was experienced at first in classifying some of the cases accurately, as to whether they should be classed as remittent fever or diarrhoea. Subsequent ex-

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perience, however, induced me to classify as remittent fever all those doubtful cases which were accompanied by mild fever and headache of a more or less periodic or remittent character, vertigo, persistent anorexia, and subsequent anæmia, even though attended with diarrhœa. After our departure from Paraguay and return to Monte Video, cases of remittent fever, ague, diarrhœa, dysentery, and jaundice occurred, and to my mind were strong evidence of the malarious poisoning to which the crew had been subjected in Paraguay, and from which vessels stationed at Monte Video and Buenos Ayres are apparently not exempt.

"Although the officers suffered much less than the men, they did not entirely escape, and their greater immunity may have arisen, in great measure, from their better diet, and more perfect rest, owing to their possessing mosquito nets."

Such topographical observations as these are very interesting and extremely valuable to those who may hereafter be called upon to serve in the same locality.

Remittent Fever.—Forty cases of this form of fever were entered on the sick-list, twenty-three of which occurred in the Cracker. Of the total number of cases, thirty-two were due to service in the River Paraguay. The chief characteristic of the disease was the debility which followed it, and the tedious convalescence. The average duration of each case was about three weeks.

Cholera.—A single and fatal case of what is returned as cholera maligna occurred in the Egmont, in the person of a delicate-looking boy who had only recently joined the ship from England, who was placed on the sick-list at Rio on the 6th of May. He was brought to the sick-bay early in the morning of that day by one of the ship's police, who had found him lying on the form in his mess, and seeing him looking very ill brought him up. His lips were blue; there was a blue tinge below the eyes, and the skin was cold. He said that he had had frequent vomiting and purging during the night, which had ceased at 4 a.m. He had no vomiting after coming to the sick-bay; his skin got warmer, and his bowels were not moved until 1 p.m., when he passed a large white watery stool. The reaction was, however, only temporary, the surface gradually becoming again cold, notwithstanding assiduous friction, and constant application of warmth by means of hot bottles, blankets, and heat over the epigastrium. Warm brandy-and-water was given from to time, as well as ammonia and ether. Chlorodyne in small doses was given, and appeared to raise somewhat the volume of the pulse, but only for a moment. The features assumed the pinched appearance, the breath the coldness, and the skin the clammy, corpse-like feel characteristic of the disease. He gradually sank, and died at 2 p.m. At the moment of death a very large rice-water stool passed away.

II. General Diseases.—Section B., Constitutional Group.

Seventy-eight cases of various forms of disease appear in this section, of which sixty-two were cases of rheumatism. One case of rheumatism, and two of phthisis proved fatal. The majority of the cases

cases of rheumatism occurred in the Nassau, which was employed surveying the Straits of Magellan. The average duration of each case was about twelve days.

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Syphilis, Primary and Secondary.—Only six cases of the former and seven of the latter form of disease were under treatment during the twelve months. Combined, however, they involved a loss of 490 days' service.

Class II.
Sect. B.

III. Diseases of the Nervous System and Organs of the Special Senses.

Under this head, thirty-eight cases of different forms of disease were entered on the sick-list, of which three were invalided, and three proved fatal.

Class III.

Apoplexy.—A fatal case of apoplexy occurred in the person of a stoker of the Narcissus, an old man of a very irritable temper, and worn-down constitution, but generally speaking temperate in his habits. After eating a very hearty supper of preserved meat on the evening of the 22nd March, the ship being then under steam, he went on duty into the stokehold at 8 p.m., and very soon after was seen to stagger and fall. He was brought at once up to the sick-bay in an unconscious state, with violent muscular spasms and dilated pupils, in which condition he remained about four hours, when he rallied, and on the following evening was quite conscious. At 11 a.m., after taking some beef-tea and wine, he fell back in his bed and expired. No examination of the body after death took place.

Tetanus.—A fatal case of this disease occurred in the person of a young ordinary seaman of the Cracker, who, on the 6th of September, at Asuncion, in shoving off his boat from the shore, trod on a broken bottle and received a slight wound across the ball and outer side of the right great toe. The cut was half an inch long and only skin deep; it bled freely, and no sand or broken glass could be detected in it; its edges were brought together by adhesive plaster, and water dressing applied. On the 13th the wound had healed and he was discharged to duty. On the 14th, a small portion of the cicatrix was found to have opened; it was dressed, and he continued at his duty, wearing his shoes, and on the 18th the wound had again healed. On the 19th the ship reached Buenos Ayres, having left Asuncion on the 11th. On the evening of the 19th he was re-entered on the sick-list. He stated that he had knocked the cicatrix, which appeared tender and irritable. Poultices were applied. The further history of the case is better given in the report of the medical officer of the vessel. "20th September.—Complains of pain of chest at lower end of sternum. There was no constitutional disturbance, and no importance was attached to this pain, doubtless diaphragmatic, and the first indication of the grave nature of the case: however, this was not recognised at the time, but as he stated that early in the morning of the 17th, when sleeping in his hammock slung on deck, he was so cold he was compelled to turn out and go

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below, the pain was considered to be rheumatic. The wound is still tender; continue warm poultices. 21st September.—Has passed a restless night, which he attributes to the pain in chest. He was ordered to keep his hammock, and a sinapism to be applied to seat of pain. No change in the appearance of the cicatrix. 1 p.m.—He sent for me and complained that on attempting to turn in his hammock 'his shoulders had been frozen stiff.' There was no muscular spasm present when I reached his hammock, but the pulse was much accelerated, and he was bathed in perspiration. The bowels were constipated. At 1.15 p.m., the spasms returned, affecting the muscles of the nape of the neck, shoulders, and arms, shortly followed by partial opisthotonos. The cicatrix was laid open and examined, but no foreign body could be discovered in it.

"As there could be longer any question as to the very serious nature of the case, he was at once removed to the British Hospital, Buenos Ayres, where he arrived at 3.45 p.m., by which time there was well-marked opisthotonos; the sterno-mastoid, facial, and abdominal muscles were also involved. Pulse seventy-six. Skin perspiring profusely. Bowels confined.

"22nd September.—On visiting him this morning the resident medical officer kindly furnished me with the following report. Shortly after his admission the spasms increased rapidly in frequency and intensity, and in the evening there was complete opisthotonos, the body resting on the occiput and heels, with every appearance of an immediate fatal termination. A blister had been applied to the nape and over the upper dorsal vertebræ, with ice to the loins. Calomel and jalap, and turpentine enemata, had been employed, but unsuccessfully. Croton oil was then ordered, and a free evacuation of the bowels obtained. Bromide of potassium was given in scruple doses at short intervals. At 7 p.m., sub-cutaneous division of the inner branches of the internal plantar and musculo-cutaneous nerves was performed, after which the severity of the symptoms was greatly lessened. Prior to the operation an excessively sensitive spot was observed at the external end of the cicatrix, pressure on which induced violent spasms; this at once ceased on section of the nerves, but an excessive irritability of all the superficial nerves on both sides of the body was observed.

"After the operation, the bromide was discontinued, and the tincture of belladonna given in frequent small doses.

"This morning his face was flushed; bathed in sweat; pupils slightly dilated. He expressed himself as easier. He had slept at intervals during the night. Pulse seventy-six; respiration twenty-eight. The spasms occur at longer intervals and are less violent; one was induced during my visit by attempting to drink, but this is not always so, and he had been able to take a fair amount of fluid nourishment, wine, milk, beef-tea, &c.

"23rd September.—On visiting him this morning, I learned that the tincture of belladonna had been continued until there was dryness of the fauces, slight dilatation of the pupils, and delirium, but no sensible improvement resulted; on the contrary, there had been a slight exacerbation towards the evening as on the previous day when the belladonna was discontinued and the bromide again given.

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He passed a fair night, sleeping at intervals. The spasms were milder, chiefly affecting the shoulders, nape of neck, and face. Pulse eighty; breathing twenty-eight; bowels acting; urine passed freely.

"Early this forenoon a sudden change for the worse occurred; the breathing became shallow and hurried, and he died in the afternoon.

"The ship sailed the same day for Monte Video, and no examination of the body was made."

In remarking on this painful case, the same officer observes: "Tetanus is very common in the Argentine Confederation and Paraguay (and Brazil also, I believe). It is much dreaded by all civil and military surgeons in the two former countries. The idiopathic and traumatic varieties are both met with. Trismus neonatorum is very common and fatal. Tetanus was most common in the military hospitals in Paraguay during the cold season, and in Buenos Ayres the medical men are inclined to associate it with 'pamperos,' a cold southerly wind common to this country and Paraguay. The case just detailed appeared to suffer from evening exacerbations; to be of an intermittent type, which might be due to exposure to marsh miasmata in Paraguay, during his first and only visit to that country.

"I am not aware that the importance of epigastric pain shooting to the back,—diaphragmatic pain,—is generally recognised as one of the earliest and most characteristic premonitory symptoms of this disease. In the case on board this ship, this symptom was present some thirty hours before the neck or jaws were affected; stiffness and pain of which are stated in the text-books to be the first symptoms of the disease. A medical friend at Buenos Ayres of considerable surgical experience, however, considers this epigastric or diaphragmatic pain as the first indication of the disease, and lays down the following axiom as the result of his experience at Buenos Ayres: 'Epigastric pains shooting through the spine after wounds indicates the onset of tetanus, whereas præcordial distress under similar circumstances indicates pyæmia.'"

IV. Diseases of the Circulatory System.

There is very little to be said under this head. Four cases only of functional disease of the heart were entered on the sick-list, and of these one was invalided. The average duration of each case was between thirty-two and thirty-three days.

Class IV.

V. & VI. Diseases of the Absorbent System and Ductless Glands.

Seven cases of sympathetic bubo, and two of inflammation of the lymphatics, were entered on the sick-list, and came under this head. They were of no special interest; the total number days' sickness resulting from them was 168.

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Class VII.

VII. Diseases of the Respiratory System.

Under this head 183 cases were entered on the sick-list, of which 171 were ordinary catarrh. From all diseases one person was invalided and three died. Of the deaths, one was from bronchitis and two from pneumonia. There was nothing to call for observation in connection with the diseases in this class.

VIII. Diseases of the Digestive System.

Class VIII.

Three hundred and twenty-nine cases of various forms of disease appear under this head, but they fortunately caused little loss to the service by invaliding, and none by death. The most important affections were dysentery and diarrhoea, of which there were fifteen cases of the former and 179 of the latter. Of these the Cracker alone returns twelve case of dysentery and fifty-eight of diarrhoea. The medical officer states that three of the cases of dysentery would perhaps more appropriately have been classed as dysenteric diarrhoea, or even as fever with enteric complication, but that whatever their correct classification might be, they were, he was convinced, the results of malarious poisoning, quite as much as the cases of remittent fever and ague that were occurring at the same time, and he attaches much importance to the opinions of those who look on most of the dysentery and diarrhoea met with in the rivers Paraguay, Parana, and Plate as of malarious origin. Of the cases of diarrhoea he states that the greater number and the severest cases were met with during river service, more especially in Paraguay, during the hot season. Their duration varied from two to sixteen days, and they were evidently, he thinks, due to climatic and local causes, in connection with that service. They were characterised by severe colic and troublesome tenesmus; thin, liquid, coffee-coloured dejections; in one case vomiting and rice-water stools, but no cramps or collapse. Mild aperients, astringents, opiates, and quinine were the chief remedies employed; the latter, combined with Dover's powder, being highly beneficial.

In the Beacon, in which there were two cases of dysentery and seventeen of diarrhoea, the medical officer observes that both cases of dysentery occurred at Asuncion. "In one the dysentery symptoms were complicated by remittent fever, the spleen became enlarged and the man was invalided. The other, a healthy Marine, was sent to duty after thirty-six days' illness. The dysenteric symptoms were not urgent, but a strong tendency to remission was observed, hence the tediousness of the case. Neither of these men had been on shore, and they had no opportunity of committing any irregularity on board. The crew had fresh meat five times a week, and condensed water alone was used on board. It would appear, therefore, that these cases were caused by the general malarious influences to which the ship was exposed at Asuncion." He states further, that in the dysentery and diarrhoea occurring at that place, quinine was the most valuable remedial agent.

IX. & X. Diseases of the Urinary and Generative Systems.

There is nothing of a noteworthy character in the returns under this head. The only diseases entered on the sick-list were gonorrhoea, of which there were six cases, stricture three cases, and orchitis five cases. The total days' sickness from these diseases was 323, which gives an average duration of about twenty-three days to each case.

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Classes IX.
& X.

XI. Diseases of the Organs of Locomotion.

There was nothing of the slightest importance under this head. The cases were chiefly various forms of bursitis and synovitis.

Class XI.

XII. & XIII. Diseases of the Cellular and Cutaneous Systems.

Two hundred and seventy-eight cases of various forms of disease were entered on the sick-list under this head. Of these, 212 were boils and abscesses, and fifty-three were ulcers. The average duration of each of these cases of the former affection was between nine and ten days, and of the latter, seventeen days. Many of the ulcers were caused by mosquito bites.

Classes XII.
& XIII.

Unclassed Diseases.

Under this head appear ten cases of debility, from climatic cachexia chiefly, and three cases of alcoholic poisoning.

Wounds and Injuries.

A man sustained fatal fracture of the skull by falling from a pier; and a man was drowned by falling overboard from aloft. These were the only fatal casualties in the squadron during the year.

The total number of deaths was twenty, which is in the ratio of 21.5 per 1,000 of force, being an increase, compared with the preceding year, equal to 6 per 1,000. This increase was altogether owing to the prevalence of febrile diseases, and especially of yellow fever.

Invaliding.

In General Diseases, Section A., one person was invalided for the sequellæ of remittent fever; and in Section B., one for phthisis pulmonalis. Three persons were invalided for diseases of the nervous system and organs of the special senses; one for diseases of the circulatory system; one for diseases of the respiratory system; five for diseases of the digestive system; four for unclassified diseases; and three for wounds and injuries of various kinds. The total number invalided was nineteen, which is in the ratio of 20.4 per 1,000 of force, being almost precisely the same invaliding rate as in the previous year.

TABLE, No. 1.

SHOWING the Number of Cases of all DISEASES and INJURIES, and the Number
INVALIDED and DEAD, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided,		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A. :						
Typhus Fever - - -	6	6·4	—	—	2	2·1
Enteric Fever - - -	3	3·2	—	—	2	2·1
Simple continued Fever - -	78	83·8	—	—	—	—
Yellow Fever - - -	6	6·4	—	—	4	4·3
Ague - - -	68	73·1	—	—	—	—
Remittent Fever - - -	40	43·	1	1·	—	—
Cholera - - -	1	1·	—	—	1	1·
Influenza - - -	1	1·	—	—	—	—
II. General Diseases, Section B. :						
Rheumatism - - -	62	66·6	—	—	1	1·
Gout - - -	1	1·	—	—	—	—
Syphilis - { Primary - -	6	6·4	—	—	—	—
{ Secondary - -	7	7·5	—	—	—	—
Phthisis Pulmonalis - -	2	2·1	1	1·	2	2·1
III. Diseases of the Nervous System, and Organs of the Special Senses :						
Apoplexy - - -	1	1·	—	—	1	1·
Sunstroke - - -	7	7·5	—	—	—	—
Paralysis - - -	—	—	—	—	1	1·
Vertigo - - -	1	1·	1	1·	—	—
Epilepsy - - -	1	1·	—	—	—	—
Neuralgia - - -	7	7·5	—	—	—	—
Insanity - - -	2	2·1	—	—	—	—
Diseases of the Nervous System	3	3·2	1	1·	1	1·
Diseases of the Eye - -	15	16·1	1	1·	—	—
Diseases of the Ear - -	1	1·	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the Heart } Functional -	4	4·3	1	1·	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	7	7·5	—	—	—	—
Glandular System - - -	2	2·1	—	—	—	—
VII. Diseases of the Respiratory System:						
Catarrh - - - - -	171	183·8	—	—	—	—
Hæmoptysis - - - -	1	1·	—	—	—	—
Other Diseases of the Lungs -	11	11·8	1	1·	3	3·2
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	38	40·8	—	—	—	—
Dyspepsia - - - - -	68	73·1	3	3·2	—	—
Dysentery - - - - -	15	16·1	1	1·	—	—
Diarrhœa - - - - -	179	192·4	—	—	—	—
Colic and Constipation - -	18	19·3	—	—	—	—
Hæmorrhoids - - - - -	4	4·3	—	—	—	—
Worms - - - - -	2	2·1	—	—	—	—
Other Diseases of the Stomach, &c. - - - - -	—	—	1	1·	—	—
Diseases of the Liver, Spleen, &c. - - - - -	5	5·3	—	—	—	—
IX. & X. Diseases of the Urinary and Generative Systems:						
Gonorrhœa - - - - -	6	6·4	—	—	—	—
Stricture - - - - -	3	3·2	—	—	—	—
Orchitis - - - - -	5	5·3	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c.	7	7·5	—	—	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	212	227·9	—	—	—	—
Ulcer - - - -	53	56·9	—	—	—	—
Erythema - - - -	1	1·	—	—	—	—
Diseases of the Skin - -	3	3·2	—	—	—	—
Scabies - - - -	9	9·6	—	—	—	—
Unclassed:						
Debility - - - -	10	10·7	4	4·3	—	—
Poisoning - - - -	3	3·2	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	236	253·7	3	3·2	1	1·
Burns and Scalds - - -	9	9·6	—	—	—	—
Submersion and Drowning -	1	1·	—	—	1	1·
TOTALS - - -	1,402	1,507·5	19	20·4	20	21·5

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Typhus Fever - - -	136	-	136	·3	·3
Enteric Fever - - -	47	10	57	·1	·1
Simple continued Fever - -	772	-	772	2·1	2·2
Yellow Fever - - -	26	-	26	—	—
Ague - - - - -	357	-	357	·9	·9
Remittent Fever - - - -	795	-	795	2·1	2·2
Cholera - - - - -	1	-	1	—	—
Influenza - - - - -	10	-	10	—	—
II. General Diseases, Section B.:					
Rheumatism - - - -	620	131	751	2·	2·1
Gout - - - - -	14	-	14	—	—
Syphilis - { Primary - - -	245	-	245	·6	·6
{ Secondary - - -	222	23	245	·6	·6
Phthisis Pulmonalis - -	139	28	167	·4	·4
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Apoplexy - - - - -	1	23	24	—	—
Sunstroke - - - - -	72	-	72	·1	·1
Paralysis - - - - -	-	30	30	—	—
Vertigo - - - - -	1	-	1	—	—
Epilepsy - - - - -	2	-	2	—	—
Neuralgia - - - - -	55	-	55	·1	·1
Insanity - - - - -	11	39	50	·1	·1
Diseases of the Nervous System	23	2	25	—	—
Diseases of the Eye - -	139	10	149	·4	·4
Diseases of the Ear - -	4	-	4	—	—

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*cont'd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System :					
Disease of the Heart } Functional -	53	76	129	·3	·3
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - -	125	36	161	·4	·4
Glandular Diseases - -	7	-	7	—	—
VII. Diseases of the Respiratory System :					
Catarrh - - - - -	898	-	898	2·4	2·5
Hæmoptysis - - - -	19	-	19	—	—
Other Diseases of the Lungs -	471	-	471	1·2	1·2
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	186	-	186	·5	·5
Dyspepsia - - - - -	422	16	438	1·2	1·2
Dysentery - - - - -	333	145	478	1·3	1·3
Diarrhœa - - - - -	909	28	937	2·5	2·6
Colic and Constipation - -	87	-	87	·2	·2
Hæmorrhoids - - - -	35	-	35	—	—
Worms - - - - -	18	-	18	—	—
Diseases of the Stomach, &c. -	-	48	48	·1	·1
Diseases of the Liver, &c. -	106	-	106	·2	·2
IX. & X. Diseases of the Urinary and Generative Systems :					
Gonorrhœa - - - - -	210	-	210	·5	·5
Stricture - - - - -	36	-	36	—	—
Orchitis - - - - -	77	-	77	·2	·2

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - - -	125	15	140	·3	·3
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	2,018	-	2,018	5·5	5·9
Ulcer - - - - -	901	-	901	2·4	2·5
Erythema - - - - -	6	-	6	—	—
Diseases of the Skin - -	59	-	59	·1	·1
Scabies - - - - -	9	38	47	·1	·1
Unclassed:					
Debility - - - - -	160	-	160	·4	·4
Poisoning - - - - -	49	-	49	·1	·1
Wounds and Injuries:					
Wounds, Injuries, &c. - -	2,932	242	3,174	8·6	9·2
Burns and Scalds - - -	92	-	92	·2	·2
TOTALS - - -	14,035	940	14,975	41·	44·

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship on the SOUTH EAST COAST OF AMERICA STATION.

CAUSE OF INVALIDING.	Beacon.	Cracker.	Egmont.	Narcissus.	Pylades.	Speedwell.	Total.
I. General Diseases, Section A.:							
Remittent Fever - - - -	-	1	-	-	-	-	1
II. General Diseases, Section B.:							
Phthisis - - - - -	-	-	-	-	1	-	1
III. Diseases of the Nervous System and Organs of the Special Senses:							
Vertigo - - - - -	-	1	-	-	-	-	1
Diseases of the Nervous System -	1	-	-	-	-	-	1
Diseases of the Eye - - - -	-	-	-	-	-	1	1
IV. Diseases of the Circulatory System:							
Functional Disease of the Heart -	-	1	-	-	-	-	1
VII. Diseases of the Respiratory System:							
Diseases of the Lungs - - -	-	-	-	-	1	-	1
VIII. Diseases of the Digestive System:							
Dyspepsia - - - - -	-	-	2	-	1	-	3
Dysentery - - - - -	-	1	-	-	-	-	1
Diseases of the Stomach, &c. - -	-	-	-	1	-	-	1
Unclassed:							
Debility - - - - -	2	1	-	-	1	-	4
Wounds and Injuries: .							
Wounds - - - - -	-	1	1	1	-	-	3
TOTAL - - -	3	6	3	2	4	1	19

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the SOUTH EAST COAST OF AMERICA STATION.

CAUSE OF DEATH.	Cracker.	Egmont.	Greyhound.	Narcissus.	Nassau.	Total.
I. General Diseases, Section A.:						
Typhus Fever - - - - -	-	-	-	-	2	2
Enteric Fever - - - - -	1	-	-	1	-	2
Yellow Fever - - - - -	-	4	-	-	-	4
Cholera - - - - -	-	1	-	-	-	1
II. General Diseases, Section B.:						
Rheumatism - - - - -	-	-	-	1	-	1
Phthisis - - - - -	-	-	1	1	-	2
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - - -	-	-	-	1	-	1
Paralysis - - - - -	-	-	1	-	-	1
Diseases of the Nervous System - -	(a) 1	-	-	-	-	1
VII. Diseases of the Respiratory System:						
Diseases of the Lungs - - - -	-	-	1	2	-	3
Wounds and Injuries:						
Wounds - - - - -	-	-	-	1	-	1
Drowned - - - - -	-	-	-	1	-	1
TOTAL - - -	2	5	3	8	2	20

(a) Tetanus.

TABLE, No. 5.

SHOWING the Number of CASES of all DISEASES and INJURIES in the Ships employed
on the SOUTH EAST COAST OF AMERICA STATION.

DISEASE OR INJURY.	Beacon.	Cracker.	Egmont.	Greyhound.	Linnet.	Marines, Falk- land Islands.	Narcissus.	Nassau.	Oberon.	Pylades.	Speedwell.	Spider.	Total.
I. General Diseases, Section A.:													
Typhus Fever - - -	-	-	-	-	-	-	-	6	-	-	-	-	6
Enteric Fever - - -	1	1	-	-	-	-	1	-	-	-	-	-	3
Simple continued Fever - - -	-	21	17	13	-	-	23	2	-	-	1	1	78
Yellow Fever - - -	-	-	6	-	-	-	-	-	-	-	-	-	6
Ague - - -	56	6	-	-	4	-	-	-	1	1	-	-	68
Remittent Fever - - -	9	23	-	-	-	-	5	-	3	-	-	-	40
Cholera - - -	-	-	1	-	-	-	-	-	-	-	-	-	1
Influenza - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
II. General Diseases, Section B.:													
Rheumatism - - -	5	5	1	7	2	-	11	21	3	1	4	2	62
Gout - - -	-	-	-	1	-	-	-	-	-	-	-	-	1
Syphilis {Primary - - -	-	-	1	2	-	-	1	2	-	-	-	-	6
{Secondary - - -	-	5	-	-	-	-	2	-	-	-	-	-	7
Phthisis Pulmonalis - - -	-	-	-	1	-	-	-	-	-	1	-	-	2
III Diseases of the Nervous System and Organs of the Special Senses:													
Apoplexy - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Sunstroke - - -	-	3	-	-	-	-	-	-	4	-	-	-	7
Vertigo - - -	-	1	-	-	-	-	-	-	-	-	-	-	1
Epilepsy - - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Neuralgia - - -	-	1	-	1	-	-	-	-	5	-	-	-	7
Insanity - - -	-	-	-	-	-	-	2	-	-	-	-	-	2
Diseases of the Nervous System	1	(a)1	-	1	-	-	-	-	-	-	-	-	3
Diseases of the Eye - - -	-	-	-	8	-	-	2	2	1	1	1	-	15
Diseases of the Ear - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
IV. Diseases of the Circulatory System:													
Diseases of the Heart, Functional	-	2	-	1	-	-	-	-	-	-	-	1	4
V. & VI. Diseases of the Absorb- ent System and Duct- less Glands:													
Bubo (<i>Symp.</i>) - - -	2	-	1	-	2	-	-	-	-	1	1	-	7
Glandular System - - -	-	-	-	2	-	-	-	-	-	-	-	-	2
VII. Diseases of the Respiratory System:													
Catarrh - - -	30	9	5	16	-	3	76	4	13	7	3	5	171
Hæmoptysis - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Other Diseases of the Lungs -	-	-	-	4	-	-	6	-	-	-	-	1	11

(a) Tetanus.

TABLE No. 5.—Showing the Number of Cases of all Diseases and Injuries, &c.—*contd.*

DISEASE OR INJURY.	Recon.	Craker.	Egmont.	Greyhound.	Linnet.	Marines, Falk-land Islands.	Narcissus.	Naasau.	Oberon.	Pyladea.	Speedwell.	Spider.	TOTAL.
VIII. Diseases of the Digestive System :													
Cynanche - - - -	-	7	1	9	-	-	14	1	4	1	-	1	38
Dyspepsia - - - -	-	7	37	-	-	-	5	3	6	7	2	1	68
Dysentery - - - -	2	12	-	-	-	-	-	-	1	-	-	-	15
Diarrhoea - - - -	17	58	19	16	2	-	36	5	7	5	14	-	179
Colic and Constipation - - -	-	6	-	1	-	-	7	1	2	-	1	-	18
Hæmorrhoids - - - -	1	-	-	2	-	-	-	-	-	-	1	-	4
Worms - - - -	-	-	-	1	-	-	-	-	1	-	-	-	2
Diseases of the Liver, Spleen, &c.	-	2	-	2	-	-	-	-	-	1	-	-	5
IX. & X. Diseases of the Urinary and Generative Systems :													
Gonorrhœa - - - -	1	-	-	2	-	-	3	-	-	-	-	-	6
Stricture - - - -	-	-	-	1	-	-	1	-	-	-	1	-	3
Orchitis - - - -	-	-	1	-	-	-	2	-	1	1	-	-	5
XI. Diseases of the Organs of Locomotion :													
Diseases of the Bones, Joints, &c.	-	2	-	3	-	-	1	-	-	-	1	-	7
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :													
Phlegmon and Abscess - -	15	32	12	33	-	1	62	19	9	14	12	3	212
Ulcer - - - -	9	4	3	10	-	-	18	3	3	2	-	1	53
Erythema - - - -	-	-	-	1	-	-	-	-	-	-	-	-	1
Diseases of the Skin - -	-	1	1	1	-	-	-	-	-	-	-	-	3
Scabies - - - -	-	8	-	-	-	-	1	-	-	-	-	-	9
Unclassed :													
Debility - - - -	4	1	1	1	-	-	1	-	-	1	1	-	10
Poisoning - - - -	-	-	-	-	-	(b)3	-	-	-	-	-	-	3
Wounds and Injuries :													
Wounds, &c. - - - -	14	11	18	25	2	1	107	21	16	7	13	1	236
Burns and Scalds - - -	1	3	1	1	-	-	3	-	-	-	-	-	9
Submersion and Drowning -	-	-	-	-	-	-	1	-	-	-	-	-	1
TOTAL - - -	168	232	126	166	12	9	394	91	80	51	56	17	1,402

(b) By alcohol.

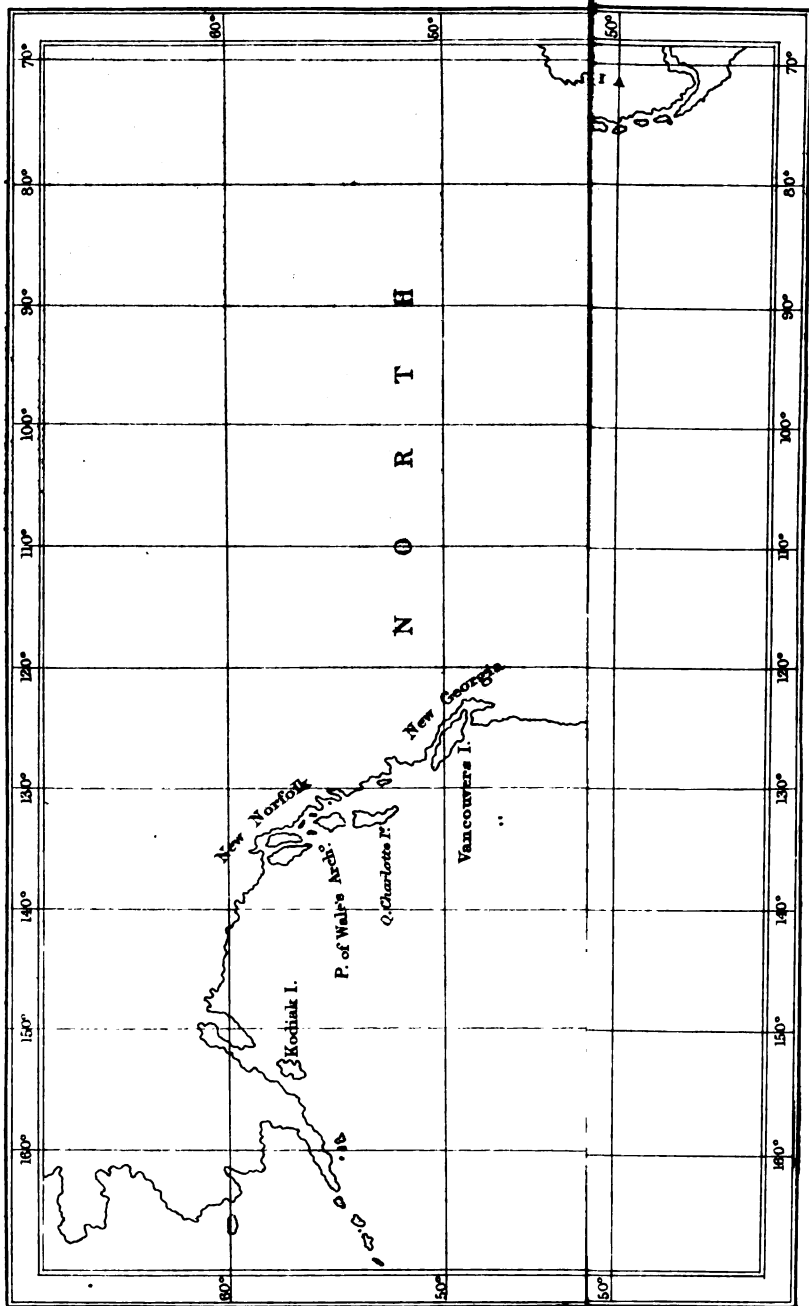
TABLE, No. 6.

SHOWING the Names of the Ships; the Average Complements, &c.; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily in each Ship; and the Number Discharged to Hospital.

P. O. Paid off. S. C. Station changed.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	PERIOD.	Average Complements.	Average Complements Corrected for Time.	Number of Days' Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
Fourth Rate -	Narcisus - P.O.	Devonport -	4 April 1865	35	2,665	S. 400	1 Jan. to 17 July	515	280	394	4,827	13.2	47.1	8
Sixth Rate -	Pylades - S.C.	Sheerness -	7 Dec. 1867	17	1,278	S. 350	1 Oct. to 31 Dec.	280	70	51	597	1.6	22.6	1
Sloop -	Greyhound - P.O.	Devonport -	23 Sept. 1865	5	880	S. 200	1 Jan. to 11 Sept.	165	115	166	1,569	4.3	37.3	6
Gun Vessel -	Bacon - Cracker - Speedwell - S.C.	Sheerness - Portsmouth - Woolwich -	15 Jan. 1868 3 Aug. 1868 24 July 1867	4 4 5	465 467 428	S.S. 120 S.S. 120 S. 80	Year - Year - 1 April to 31 Dec.	70 70 75	70 70 60	168 232 56	1,413 1,998 573	3.8 5.4 1.5	54.2 77.1 25.	1 15 -
Steam Vessel -	Nassau - P.O. Oberon - P.O.	Woolwich - Sheerness -	27 July 1866 17 Nov. 1865	5 3	695 649	S. 180 P. 260	1 Jan. to 12 Aug. 1 Jan. to 20 July	95 86	60 45	91 80	1,062 568	2.9 1.5	48.3 33.3	3 1
Gun Boat -	Linnæ - Spider - P.O.	Sheerness - Monte Video	8 Aug. 1865 21 June 1865	2 2	268 236	S. 60 S. 60	1 Jan. to 31 Mar. 1 Jan. to 1 May	40 40	10 15	12 17	55 157	.1 .4	10. 26.6	- -
Receiving Ship -	Egmont -	Rio de Janeiro.	1 Sept. 1867	4	1,780	-	Year -	115	115	126	1,079	2.9	25.2	1
Marine Detachment, Falkland Islands -	-	-	-	-	-	-	Year -	20	20	9	100	.2	10.	-

PACIFIC STATION



PACIFIC STATION.

THE squadron on the Pacific station, in the year 1869, comprised thirteen vessels, viz., one ironclad; one fourth-rate; four sixth-rates; three sloops; three gun-vessels, and one storeship permanently stationed at Valparaiso. There was also a small detachment of marines on the Island of San Juan de Fuca. The returns from eight of the vessels and from the marine detachment were for the whole twelve months, and from the remaining vessels for periods varying from six to nine months. The mean force corrected for time was 2,330, and the total number of cases entered on the sick-list 3,391, which is in the ratio of 1455.3 per 1,000 of force, being a reduction compared with the preceding year equal to 199.1 per 1,000. Of these, fifty-nine were invalided, and thirty died; the former being in the ratio of 25.3, and the latter of 12.8 per 1,000. Compared with the year 1868 there was a reduction in the invaliding rate to the extent of 12.2 per 1,000, but the ratio of mortality was higher by 4.8 per 1,000.

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The average daily loss of service from General Diseases, Section A., or Febrile Group, was in the ratio of 2.2 per 1,000; from Section B., or Constitutional Group, 17.1; from diseases of the nervous system, and organs of the special senses, 1.2; of the circulatory system, .3; of the absorbent system and ductless glands, 1.3; of the respiratory system, 4.7; of the digestive system, 3.9; of the urinary and generative systems, 3.8; of the cellular tissue and cutaneous system, 11; from unclassified diseases, 3; and from wounds and injuries of various kinds, 9.2. The average number of men sick daily was 135.8, which is in the ratio of 58.2 per 1,000 of force, being a reduction compared with the preceding year, equal to 5.2 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

Under this head, 111 cases of various forms of disease were entered on the sick-list, viz., twenty of small-pox; three of enteric fever; seventy of simple continued fever; thirteen of ague; four of remittent fever, and one of erysipelas. Of these, one case of ague was invalided; and two cases of enteric fever, and one case of simple continued fever proved fatal.

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Small-pox.—All the cases of this disease occurred in the *Cameleon*. The history of the epidemic is thus given by the surgeon* of the ship. "The first case occurred on the 1st of April, in the person of a seaman belonging to No. 2 mess; the second occurred in the same mess, on the 23rd; the third, on the 27th, in No. 11 mess; the fourth, on the 28th, in No. 13 mess; the disease then appeared in the steerage and ward-room, and finally, with an irregular course, spread over the lower deck; the captain's cabin, gun-room, engineer's mess, and Nos. 3, 12, 14, 15 and 17 messes alone escaping.

"Two cases presented formidable symptoms, namely, that of a petty officer, a dark-complexioned man, a native of St. Helena, and that of the ward-room steward, a Mulatto, a native of Jamaica. The premonitory fever and pains in each were most severe, accompanied with wandering delirium. The pustules were confluent on the face and extremities." . . . "As the cases occurred they were immediately segregated below the topgallant fore-castle, and duly screened off, having for attendants men who had previously suffered from the disease, and all possible communication with the remainder of the ship's company prevented till arrangements were made with the Pacific Steam Company for the use of Morro Island, where ample house accommodation for the officers and healthy portion of the crew, and hospital accommodation for the sick, were obtained. The hospital is situated on the very summit of the island; I should say at the least 400 feet above the level of the sea. It is built of iron, is well ventilated, and has a good verandah surrounding the house, with detached cook-house, waterclosets, and bath room. On the morning of the 4th of May the sick were landed, and the remainder of the ship's company on the following day. Between the 5th and the 20th of May the ship was twice battened down, and fumigated with chlorine gas, the ship's company's beds and bedding being suspended from the beams of the lower deck, and between those dates the lower decks were scraped and whitewashed frequently, and all due attention paid to ventilation, &c. Before the disembarkation of the crew all moveable articles from the holds, lower deck, and cabins were removed to the upper deck when the ship was permitted to remain with open hatches, lower deck ports, &c. till the 10th of May, when she was again battened down and fumigated as before, the hatches remaining closed for twenty-four hours. The same operation was gone through on the 15th, and from the 17th working parties were daily sent off to the ship, for the purpose of thoroughly cleansing, painting and whitewashing the vessel before the embarkation of the officers and healthy portion of the crew, which took place on the 31st of May, on which date two officers were discharged from hospital, and sent on board.

"Eight patients were discharged from hospital on the 2nd of June, leaving ten under treatment. One ran from hospital on the 3rd, an engineer's cook, who was nearly well. He had entered at Panama a short time previously, and has not since been heard of.

The

* Surgeon F. A. Brice, M.D.

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The nine remaining persons were, in compliance with an order from the Commander in Chief, embarked on the evening of the 7th of June. Four of them were again segregated under the forecabin, as desquamation was incomplete, and the remaining five were discharged to light duty. On the morning of the 9th of June the *Cameleon* sailed from Tobago for Esquimaux.

" Before the discharge of these patients from hospital, all their wearing apparel, as well as bed and bedding, were immersed in boiling water, to which permanganate of potash was added, and afterwards fumigated. But in several instances the articles were in such a state as to necessitate their being destroyed.

" The epidemic is said to have been brought to Panama from San Francisco about the end of October or beginning of November 1868, by one of the American steam packets running between these ports. Be that as it may, a case of small-pox was imported into Tobago from Panama on the 20th of December 1868, occurring in a native of the place who had been working at Panama in connection with the company's steamers wharf. After this date all communication with the shore at Tobago was prohibited; and, as four or five cases occurred on shore up to the 4th of January 1869, the *Cameleon* was shifted to an anchorage about three miles off Panama, where she remained until the 1st of February, when she returned to Tobago for the purpose of giving the ship's company leave, it having been reported that the island was free from the disease. Accordingly commencing on the 8th, forty-eight hours leave was granted to each watch, the whole crew being off to their leave on the 12th.

" On the 18th, there again being a report that the disease had reappeared, I went on shore, and with a vast amount of difficulty (from the unwillingness on the part of the inhabitants to give information which might prove a great pecuniary loss to them) ascertained that there were five or six cases of a confluent nature, and very many of a discrete form, all confined to native children, who were unprotected. These people look on the disease with indifference, have no faith in vaccination, and treat their patients by placing them in close dark rooms, applying greasy cloths to the face, hands and feet, and when the pustules begin to discharge and form crusts they apply cloths dipped in vinegar and water to them till they are softened, when they take a shell and with the edge scrape the whole off, leaving the sufferer in a very exhausted state from shock and sometimes loss of blood.

" There is no doubt that the disease was communicated from the shore to the ship, as variola was at that time in an epidemic form, both at Panama and Tobago, where the mortality was very great amongst the natives, few of them being protected; but by what means it was conveyed on board is doubtful, as little communication was had with Panama, and that exclusively by officers, and the first man attacked with the disease did not belong to any boat, nor had he been out of the ship since the 12th of February. I consider that the conveyance of the virus may be attributed more than probably to articles of provisions received daily from the Government contractor or bumboat from Panama; or even to the water received on board, which was purchased from the

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American Steam Packet Company. This water is obtained at Tobago from a spring about 200 feet above the level of the sea, and after a descent of about 300 yards in a valley, over gravel, the stream is dammed up by a wall, from which an iron pipe about four inches in diameter conveys all the water from the stream to the large iron tanks close to the beach, which very seldom overflow except in the rainy season, the demand being so great for the shipping lying in the bay. Now that portion of the stream between the above named spring and the dam is a constant resort for bathing by both sexes, and there I have constantly seen patients convalescent from small-pox washing their persons, desquamation going on freely at the same time. This, I think, may be looked upon as another means by which the virus may have been communicated to the ship, and generated in the system either by deglutition or application to the person."

Enteric Fever.—There were three cases of this form of fever in the squadron during the year; one in the *Topaze*, and two in the *Zealous*. Of these, the case in the *Topaze*, and one of those in the *Zealous* proved fatal. In the former instance the person affected, a young ordinary seaman, was placed on the sick-list at Valparaiso on the 9th of January, complaining chiefly of debility, suffused eyes, and general catarrhal symptoms, over which, treatment seemed to have little control. He became emaciated, and nausea set in, the tongue becoming very red at the tip and edges, but not furred. On the 17th he was seized with diarrhœa, which, although checked, speedily recurred, and on the 22nd there was low wandering delirium. On the 25th a rose-coloured rash appeared over the chest and abdomen, which, however, soon disappeared. Diarrhœa now appears to have become urgent, the stools being frequent, and very liquid. Delirium was almost constant, and his symptoms gradually becoming worse, he died on the morning of the 2nd of February. No post-mortem examination of the body was made.

With reference to the two cases of enteric fever which occurred in the *Zealous*, the staff-surgeon* of that vessel observes—"Two cases of enteric fever occurred at Valparaiso within a few days of each other. Both of the men had been on leave on shore, and one of them was known to have visited a house in which persons were lying in bed sick of the same form of fever. The other case could not so well be traced to any source of contagion, principally from the unwillingness of the man to give any information. One case was much more severe than the other, and terminated fatally after an illness of about six days. He died at sick quarters at Valparaiso. The other case was left behind at the same place when the ship left, as he was not in a fit condition to be brought on board, but it appeared probable that he would eventually recover. On inquiring amongst the different medical men with whom I had an opportunity of conversing, I was informed that this disease is seldom seen at Valparaiso,

* Staff Surgeon John Cockin.

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Valparaiso, and indeed that such cases are never seen in practice; but it appears that the poorer part of the population are not at all looked after, and unless they can afford to pay for a medical man, they get no attendance whatever. There are no surgeons to attend the poor gratuitously, and there is no poor law; the consequence is, that when they are attacked by disease, nature does her own work, and people live or die according to the severity of the attack. It is not to be wondered at that enteric fever should have found a home at Valparaiso. There is hardly such a thing as a drain in the place, and it is by no means usual to have any conveniences for natural purposes attached to the houses. The principal business streets are kept in a little better order than the others, but the whole of the ground in some localities becomes saturated with ordure, and as all the water, or at any rate the greater part of that used for drinking, is obtained from the ravines or cataracts intersecting the hills above the town, it is obvious that during the rains very much decomposing animal debris must be mixed up with it, and consequently the only wonder is that fever and dysentery do not exist to a greater extent. In the case which was longest under treatment on board (nine days), the symptoms at first were very slight, and only increased in intensity after a sudden outbreak of delirium, during which he jumped overboard, and was nearly drowned. After this he became much worse, and was sent to the hospital, where he was doing well when the ship left. The other case was much more severe from the first, probably from his not having applied until he no longer felt himself able to move about. He soon became violently delirious, and was sent to the hospital after being only two days under supervision. He only lived three days after he was sent on shore, getting gradually worse all the time, and death appeared to take place from uræmic poisoning, as there was absolute suppression of urine for three days prior to the fatal termination. In this case no spots were observed on the abdomen, probably because there was not sufficient time for them to become developed. In the other case the lenticular spots were noticed after the first week. The urine in both cases was albuminous from the first. The post mortem examination of the case, which proved fatal, showed the enteric lesions usually found in this disease, although not in a very advanced stage."

There can be no question of the capabilities Valparaiso possesses for originating enteric fever and bowel complaints generally. They have been frequently referred to in these Reports, and in that for 1868* it is stated that these diseases are not at all uncommon, and their origin is attributed to defective drainage and an impure water supply. The lesson to be gained from this knowledge is, of course, that at Valparaiso, and in all localities similarly circumstanced, distilled water only should be used on board our ships of war for drinking and culinary purposes.

Simple

* "Statistical Report of the Health of the Navy, for the Year 1868," p. 145. 384.

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Simple Continued Fever.—Seventy cases altogether of this form of fever occurred in the squadron, twenty-eight of which appear in the Returns from the Cameleon. In that vessel the majority of the cases occurred while she was employed surveying the coast of Central America. They were attributed to climatic causes. One death appears under this head. The case was that of an officer, and is somewhat obscure, the febrile symptoms not being of a very pronounced character.

Ague.—Thirteen cases of ague occurred in the Squadron, ten of which appear in the Returns from the Chanticleer. With reference to seven of these cases the surgeon* of the vessel observes “Seven cases were entered on the sick-list, all of which occurred soon after leaving Manzanilla, where miasmatic fevers are very common, and where the disease appears to have been contracted. Two of the men attacked had, when there, been engaged with a fishing party on shore. To all so employed quinine had been given on their return to the ship. The other men had not been out of the ship during her stay at that port, but two of them had suffered previously from ague on the China station. One of these was sent to hospital on the arrival of the ship at Valparaiso. Most of the cases were of the quotidian type, but as the disease advanced, the length of the interval in some instances increased, while in others the paroxysms were irregular, and towards the end of the complaint there was headache only at the usual time for the paroxysm to occur. In two cases pain in the region of the spleen was complained of, and in all there was marked debility throughout.”

The same officer makes the following medico-topographical remarks on the place where the fever was contracted:—“Manzanilla is situated on the coast of Mexico, in lat. 19°. 6'. N. long. 104°. 24'. W. The harbour is of a horse-shoe shape, open to the southward, and surrounded by thickly wooded hills from 300 to 500 feet high. Immediately behind the beach, on the east side of the harbour, are a number of lagoons containing brackish water, and fringed with mangrove trees. These lagoons contain numerous alligators. The town is built at the south-east corner of the harbour, and consists of from forty to fifty houses, which are chiefly constructed of undressed wood, and thatched with coarse grass. The largest lagoon is situated behind the town, separated from it in part only by a low hill. It runs in an easterly direction for a distance of about thirty miles. A canal is at present being cut by the Mexican Government to convey the water from a large river into this lagoon at its eastern extremity, partly with the view of keeping the water in the lagoon at a stated level, and ensuring a constant current through it, with the hope of improving the health of the town, and also that water communication may be obtained from Manzanilla towards the town of Colima. The diseases prevalent on shore, and to which the crews of ships are most liable, are intermittent and remittent fevers. These are most common and most severe

* Surgeon Maxwell Rodgers, M.D.

severe about the end of the wet seasons and the beginning of the dry. I was informed that in September of last year there was a severe outbreak of miasmatic fever at Manzanilla, consequent on the making of a cutting, which lowered the water considerably in one of the lagoons, leaving exposed large quantities of slimy mud, and decomposed vegetable matters. The wind was blowing at the time from the lagoon, in the direction of the town, and several of the inhabitants were suddenly attacked with vomiting, followed by fever; while silver and articles painted white were turned black. At the time of our stay, the health of the town was said to be good. The ship was anchored at some distance off shore. With one exception there was a squall off the land every day, with heavy rain, loud thunder, and most vivid lightning; these squalls generally came on in the evening. Otherwise, the weather was very fine. The thermometer ranged from 81° to 86°, and the barometer from 29.96 to 30.09."

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Remittent Fever.—Only four cases of this form of fever were under treatment in the squadron during the year, and of these, three were in the Malacca. No information is given in connection with them, but that they must have been of a very tedious character is apparent from the fact that the average duration of each case on the sick-list was nearly sixty-five days.

II. General Diseases, Section B., or Constitutional Group.

Under this head, 486 cases of various forms of disease were entered on the sick-list, viz., 197 of rheumatism, two of gout, 177 of primary syphilis, ninety-nine of secondary syphilis, one of scrofula, nine of phthisis pulmonalis, and one of dropsy. Of the total number of cases, twenty-four were invalided, and four proved fatal. It will be observed on referring to Table I., that while only nine cases of phthisis appear, ten were invalided, and four terminated fatally. This apparent discrepancy, as has repeatedly been observed in these Reports, arises either from several of those invalided or dead, being cases which were entered on the sick-list in the previous year, or from the fact that, when first placed on the list, the phthisical symptoms were not developed, and they were entered under another head.

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Rheumatism.—Of this disease, as has already been said, 197 cases were under treatment. This is in the ratio of 84.5 per 1,000, which is a decrease compared with the preceding year equal to 20.2 per 1,000. The average duration of each case on the sick-list was between sixteen and seventeen days. The surgeon* of the Charybdis, in which vessel thirty cases occurred, observes:—"This is a very common complaint in every part of the Pacific station. It is generally

* Surgeon John C. Messer, M.D.

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generally met with in the sub-acute form, is difficult to treat, medicine having apparently but little effect on the symptoms; it runs a tedious course, and generally produces, or is accompanied by, a low state of general health. Thirty cases occurred requiring 466 days on the sick-list; three being ultimately sent to hospital. A few cases of a more decidedly acute nature, and accompanied by swelling of the joints, have occurred, and these have yielded more readily to treatment. Heart complication has appeared only in one case, in which sub-acute rheumatism followed an attack of bronchitis.

"Many cases are no doubt associated with syphilis, and when rheumatism supervenes in that disease, it is most difficult to cure. There was no distinct history of syphilitic complication in any of the cases sent to hospital, although in the course of the year several cases of secondary syphilis have been under treatment, and some sent to hospital, in which rheumatism was a prominent feature."

Syphilis, Primary and Secondary.—One hundred and seventy-seven cases of primary, and ninety-nine of secondary syphilis were entered on the sick-list during the year, and of these two of primary, and four of secondary syphilis were invalided. The average duration of each case of the primary form of the disease was nearly thirty-five days, and of each case of the secondary variety forty-six days. About seventeen men were on an average daily incapacitated from the primary disease, and between twelve and thirteen from the secondary form.

The vessels which suffered most from these affections were the *Charybdis*, the *Malacca*, the *Nereus*, the *Satellite*, the *Topaze*, and the *Zealous*.

In the *Charybdis* there were fifteen cases of primary, and ten of secondary syphilis. There appears, however, some discrepancy between these numbers as returned on the nosological tables by the surgeon of the ship, and his remarks upon them, which are to the following effect:—"Venereal disease has been much more common this year than at any previous time. This is attributable to the opportunities of contracting the disease at Valparaiso and other Chilian ports.

"Thirty-four fresh attacks have been entered on the sick-list, namely, twenty-one of primary syphilis and thirteen of gonorrhœa. All these excepting a single case of gonorrhœa occurred since arriving on this station in February. The total number of entries on the sick-list for venereal disease is thirty-six. Six of these are re-entries of syphilitic cases, with secondary symptoms. In addition to the thirty thus remaining, four cases have occurred, two of primary sore and two of gonorrhœa, but as they were apparently slight in their nature, and as they appeared either in officers or men employed in light duty on the lower deck, they were treated without being placed on the sick-list. The total number of days' sickness from venereal disease was 1,638, a number considerably greater than a fourth of the total sickness from all causes during the year.

"This disease appears to affect the inhabitants of Valparaiso and other

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other Chilian ports, to a most unusual extent. No police regulations exist to prevent its spread, nor is there any medical supervision of the women affected, nor public institutions for their treatment. The unhappy consequences of such neglect are experienced by every ship's company that visits these ports, and while the people and authorities are so indifferent to their own welfare, little improvement can be expected with respect to the prevalence of this disease amongst the crews of ships.

"Of the twenty-one fresh cases, secondary symptoms have appeared in eight, while two have been discharged to hospital before sufficient time had elapsed for their development. Eleven continue as yet free. Fifteen of these cases contracted the disease at Valparaiso; four at Victoria, Vancouver's Island; one at Panama; and one at Talcahuano."

In the Malacca there were eight cases of primary, and fourteen of secondary syphilis, all of which were contracted at Valparaiso. Some of the cases of both forms of the disease presented very severe symptoms.

The medical officer* of the Nereus, which vessel is permanently stationed at Valparaiso, and in the returns from which there appear nine cases of primary, and five of secondary syphilis, observes:—"There is no legislative enactment in Valparaiso on the subject of prostitution at present, but in the face of considerable opposition, and after at least one failure, there is every prospect of an enactment, similar to that in force in France, being brought into operation some time in 1870."

The cases of syphilis in the Satellite do not call for any remark.

There were thirty-eight cases of primary, and twenty-eight of secondary syphilis in the Topaze, with reference to which the surgeon† remarks:—"It is almost supererogatory to remark on this complaint, which has been the perfect scourge of the southern division of the station, and so much aggravated by the prevalence of the practice of concealment, whether as primary or secondary, by the entire crew, who do not appreciate the significance and value of at once reporting the disease. It may be noted that there is no registration of prostitutes in the ports of Chili. The type of disease which was contracted was very severe at Valparaiso and Coquimbo, but there was very little disease as far as could be ascertained in Peru.

"The bubo which resulted from the sore was most difficult to treat, so difficult as to make one almost despair of effecting any permanent benefit. In many cases when apparently cured, the patient on resuming duty for a few days, would return to the sick-list in by no means a favourable condition. Secondary sores were very common, but skin affections not so frequent. Rheumatism as a sequela was most intractable. There was no special sore that could lead me to determine that secondary effects would be likely to follow it. A mere abrasion

* Assist. Surgeon George Mair, M.D.

† Surgeon J. L. Palmer.

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abrasion or excoriation which has healed in a day or two, has been followed by lasting sequelæ."

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In the Zealous there were sixty-six cases of primary, and seventeen of secondary syphilis. The staff surgeon makes the following observations with respect to Valparaiso, the head-quarters of the southern division of the station, and to the forms of syphilitic disease contracted there:—"The more disreputable part of the females are at this port openly prostitutes. There are a very large number of women who obtain their living solely by prostitution. Many parts of the town are entirely inhabited by this class of persons, who ply their trade completely unchecked by any supervision, and they consequently contract and propagate disease to an alarming extent. Soon after the arrival of the Zealous at this port, the men were allowed leave to go on shore. From that time there have been plenty of syphilitic cases under treatment. The disease appears to be very severe, and I have noticed that if caught from Spaniards and Portuguese, and their half-breeds, it is generally much more severe than when caught from other sources, and generally much more difficult to be eradicated from the system. The number of cases that occurred after leave was given at Valparaiso was very great, and no advice appeared to have any effect in checking the men from exposing themselves to the chance of contagion. It is much to be regretted that such a very unhealthy place should be the head-quarters of the Navy in the Pacific, and it becomes a question whether, as long as the Government will do nothing to prevent the spread of the disease, it would not be advisable to shift the position of the dépôt ship to some other place. There are ports either to the north or south of Valparaiso that might be found equally available for the position of the dépôt ship, and several in which she would be much safer than she appears to be at present. However, should it be considered politic not to change the position of the dépôt ship, and as men-of-war must call there for stores, regulations might be made, that no leave should be given to the crew while the vessel was in the port, and that ships should remain there as short a time as possible."

With reference to the disease itself, he says, "A few of these cases were contracted at Esquimalt, and some also at Coquimbo, but by far the greater number were the result of our visit to Valparaiso. As I have previously remarked, in speaking of that port, it is the most unhealthy place on the Pacific Station, for, although the smaller vessels suffer a good deal from the effects of tropical climate while they are serving on the Coast of Mexico, or that of Central America, yet the average of sickness does not appear so great in these parts as at Valparaiso.

"Syphilis appears to be very virulent when propagated from the Spanish half-breed to the English sailor. Many of the chancres were exceedingly severe, and soon followed by secondary symptoms, and these also were of considerable urgency. The character of the chancres differed much; in some cases there was hardness surrounding them, or they were placed on a hard base, and in several cases there

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was very considerable induration with hardly any ulceration, and occasionally simple abrasions. Some of the chancres again had no hardness at all around them, although there might be considerable inflammatory swelling of the prepuce or glans. Some of the sores were followed by bubo, and others, and indeed the greater number, healed without any complication. When a bubo followed a chancre, it seldom suppurated; a few cases did so, but the majority remained indolent for a long time, neither advancing nor receding, but eventually being absorbed. It was attempted in most cases to prevent suppuration, and with success generally; occasionally it failed, and matter formed: which of the cases were cured in the shortest time it is difficult to say. Almost every variety of primary chancre was seen, and the after effects were as various as the first affections. The secondary phenomena generally showed themselves in a short time; throat and skin diseases being the most frequent complaints. In those patients who joined the ship with the disease upon them, and in whom it was probable that mercurial treatment had been adopted primarily, the secondary affections when they appeared were more severe, and rheumatic pains were common. In those cases in which mercury had not been had recourse to, the pains were but seldom present and then only in mild form. Pustular and papular eruptions were the most general symptoms, and in a few cases they were severe, and required lengthened treatment. It did not appear from experience of these cases, that anything decided could be determined as to the contagious nature or otherwise of any particular chancre. It was not possible to decide what would produce secondary symptoms, and what would not. It appears from the cases under treatment, that several patients had chancres on hardened bases which have not been followed by any secondary symptoms up to the present time; and in some of the cases in which they have appeared, the chancres have not presented any distinct character, and in more than one case have been decidedly of the soft variety. It appears, therefore, impossible to say positively what sore may be followed by secondary sequelæ, nor is it at all advisable to state decidedly that any sore will be free from them. The number of buboes that followed the appearance of chancres was not numerous, but when they did arise, they were generally very tedious in their course, being for the most part indolent, neither advancing nor receding, whatever treatment was adopted. Some of them became discussed after some time, and left no remains behind, but others suppurated and discharged freely. In the latter cases the patients do not appear to have been longer on the sick-list than in the former.

“The treatment adopted was very simple, and, as a rule, very satisfactory. As a local application to chancres when they were of the usual character, chloride of zinc lotion and carbolic acid lotion were generally used. Where sloughing showed itself, or where the base of the chancre was covered with a slough, perchloride of iron was applied, dissolved in glycerine. This application always appeared to have the effect of causing the separation of the slough, and the putting on of a healthy action by the sore, and then the chloride

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of zinc generally completed the cure. This lotion has been found useful in all cases, and tends very much to promote healthy action. The application of sulphate of iron has been found of advantage, causing the sores to heal in a shorter time than they would otherwise probably have done. Occasionally nitrate of silver has been used, but its action does not appear to be so beneficial as the other applications that have been mentioned. In a few cases in which there was considerable induration, sulphate of copper in solution appeared to produce good effects, but this was not often had recourse to. Where there was much swelling of the prepuce, injections of chloride of zinc lotion underneath it, and the application of cold cloths, appeared to produce resolution of the swelling. When buboes appeared they were at first ordered to be kept wet with cold water, but this is a rather unsatisfactory method of treatment; it is not possible to keep the patients in their hammocks constantly; at least, it is only to be done by constant vigilance and untiring perseverance." "When suppuration of the bubo has taken place, a very small opening should be made in it, and all the fluid pressed out; the sac should then be injected with chloride of zinc lotion, a small piece of lint, dipped in the same lotion, applied over the opening, and a poultice over all. The injection should be repeated every morning as long as any sac remains, but under this treatment it appears very soon to contract, and the discharge to lessen. Pressure should then be applied by a compress and bandage, zinc lotion being still used to the opening, and the discharge will gradually cease, and a perfect cure be the result. This has been the treatment adopted in every case in which suppuration has taken place, and it has been attended with most desirable results. None of the old sinuses that used to be the bugbear of buboes have been present.

When secondary affections showed themselves, which, in the patients who contracted disease at Valparaiso appeared to be rather more often the case than in those who had the disease from other sources, the treatment consisted in giving alternate doses of solution of iodide of potassium, and solution of sulphate of iron, with local treatment to the throat, in cases where this was required, of inhalation of steam, medicated or not, as necessary, and the use of the chlorate of potass gargle. It does not appear, however, that gargles as a rule do very much good; it is a question whether they are ever allowed to flow sufficiently backward to reach the parts they are intended to medicate. Hot baths were sometimes used, and perfect cleanliness insisted on, and under these means the patient generally recovered after a certain time. Occasionally a mixture of iodide of potassium and potassio-tartrate of iron, which will mix without decomposition, was used, and apparently with good effect. It has never been the practice to give even the smallest quantity of mercury for the cure of this disease, and I believe that very much injury results on all occasions from the employment of this drug in the treatment of venereal diseases. Syphilitic rheumatism appears to be easily removed by the exhibition of iodide of potassium in ten grain doses, or even in larger doses if occasion require, and if it is

is at all obstinate, becoming much worse at night, which is its general character, the exhibition of a few grains of quinine given before bedtime, appears to have the effect of preventing its recurring, and by this means of enabling the iodide to exert its curative influence. Several cases have been treated on this plan with success. None of the more severe forms of the disease, nodes and other affections of the bones, rupia, or secondary ulceration, have been present, and it is probable that they may not be seen except in very rare cases, and in those in which mercury has been used."

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Sect. B.

III. Diseases of the Nervous System, and Organs of the Special Senses.

Under this head seventy-one cases of various forms of disease were entered on the sick-list, of which eleven were invalided, and two proved fatal. One of the fatal cases occurred in the person of a seaman of the *Chanticleer*, who was invalided for chronic bronchitis, and sent home in a contract steamer, on board of which he died with all the symptoms of cerebral softening. Very little information is given in connection with his case, and no post-mortem examination of the body appears to have been made.

Class III.

The other fatal case was one of embolism of the basilar artery. It occurred in the person of a petty officer of the *Reindeer*, who had a short time before the fatal seizure been under treatment for rheumatism. On the morning of the 11th of April, he was found insensible in his hammock. His messmates had failed to rouse him, and immediately sent for the medical officer of the vessel, who found him breathing loudly, and quite unconscious. He was at once discharged to the Pacific Steam Navigation Company's Hospital at Callao, from which the following report of the case was received:—

"April 11th.—Received in a state of insensibility, with loud snoring breathing. Pulse 72, soft and regular; skin moist and warm; bladder empty. It was impossible to rouse him to consciousness, but he was to some extent sensible on being shaken, or spoken to loudly and manifested some uneasiness. The left pupil responded feebly to the action of light, whilst the right was contracted and fixed, but the patient had the power of considerable muscular resistance, and it was a matter of difficulty to administer a mustard emetic by the stomach pump. He had also muscular power both in the arms and legs, which he exerted voluntarily during the administration of the emetic. Immediately on admission sinapisms were applied to the calves of the legs, and shortly afterwards profuse perspiration appeared, and both pupils became contracted and insensible. The bladder acted well, and the urine was normal. The bowels were well opened by a turpentine enema, and the stomach was washed out after he had vomited the mustard, but the matter vomited was the same as that injected into the stomach. The breathing became quiet and regular, and at no time could it have been said to have been stertorous. The heart's sounds were regular and normal.

"April 12th.—The breathing has been quiet and natural through
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Class III.

the night, but no change has taken place in the patient's general condition. He lies on his back, and cannot be roused, but he retains muscular power, and there is some reflex action on tickling the soles of the feet, whilst the nostrils are readily irritated by ammonia, and the patient shows considerable sensibility to its action. Electro-magnetism elicits active muscular contractions of the extremities, and both sides appear to be equally sensitive. Under the influence of the ammonia and the electro-magnetism the left pupil dilated and became sensitive to light, but not actively so; the right remains fixed. The bowels have been moved; stools natural and digested; has made water in a full stream, and the bladder is now empty. Pulse 72, regular and soft; skin moist and warm; tongue moist. Enemata of beef-tea have been thrown into the rectum.

"April 13th.—Has swallowed a considerable quantity of strong coffee, put into the mouth in teaspoonsful. The left pupil has again become contracted, and is barely sensitive to light; the right remains fixed, and contracted to the size of a pin's head. The bowels have been moved by a turpentine enema, and he continues to make water in a full stream, but the urine has acquired an ammoniacal odour. Pulse 78, regular and soft; skin warm and moist; extremities warm; breathing quiet.

"April 14th.—Pulse 110, feeble and fluttering; extremities cold; breathing more noisy, and slightly blowing. The bowels were moved by an enema. The bladder is empty. The pupils remain in the same state. The corneæ are flaccid, from absorption of the aqueous humour. Has continued to swallow brandy and water, strong beef-tea, and coffee, by teaspoonsful. Has now no muscular power or sense, and reflex action cannot be excited. Gradually sank, and died at 11 p.m.

"*Autopsy, Twelve Hours after Death.*—Body in fair condition, as regards muscular development. Slight rigor mortis. On opening the skull there was found to be great congestion of the vessels of the dura mater, as also of the sinuses. The vessels of the brain were highly congested, but there was no effusion into the ventricles. There was slight sero-sanguineous effusion at the base of the brain. The basilar artery was found greatly distended, and thoroughly occluded by a firm clot of blood, which was adherent to the sides of the sac, and the sac itself was adherent by bands of recent lymph to the arachnoid. The right ophthalmic artery was also largely dilated and thoroughly occluded by a clot, and the sac rested against the right optic nerve, just anterior to the commissure. The left ventricle of the heart contained a firm partially-organised fibrinous mass, adhering firmly to the corda tendineæ by the one extremity, whilst the other floated into the orifice of the aorta, and appeared to be frayed. The other organs were healthy. Stomach full of the fluid swallowed before death."

IV. Diseases of the Circulatory System.

Class IV.

Under this head, eighteen cases of various forms of disease were entered on the sick-list, of which eight were invalided and three terminated fatally. All the deaths were occasioned by organic disease of the heart. Compared with the preceding year there was a great reduction

reduction in the ratio of cases and of invaliding, but the death-rate was much higher.

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Of the three fatal cases, one occurred in the person of a Marine of the Chanticleer, who, on admission to the sick-list, stated that on the previous evening he had been called on to make a sudden and violent effort in the discharge of his duty, and that he was immediately afterwards seized with severe palpitation and difficulty of breathing, which had continued since. He said that he had for some time suffered from palpitation, but never so much as to require him to apply for treatment, and that before the present attack he had felt in his usual good health.

On examination, the heart's action was found to be very rapid, and the impulse strong; the pulse was frequent and irregular. On percussion, the cardiac dulness was greatly increased. The sounds were indistinct. A loud double murmur, loudest at the base of the heart, was heard with the second sound, and was propagated in the course of the large arteries. The respiration was hurried, but the lungs were healthy. He was placed on the sick-list on the 7th of April. On the 10th the heart's action was more rapid. Dyspnoea and cough had much increased, and there was some oedema of the feet. On the 11th his symptoms became more aggravated, and oedema extended to the legs. Moist râles were prevalent over the chest. In this way he went on, his symptoms gradually becoming more aggravated, with clearer evidences of pulmonary congestion until the 17th, when he died.

On post-mortem examination of the body, both lungs were found to be highly congested. The heart was much enlarged, particularly the left ventricle. The aortic valves were much diseased. One appeared to have been recently ruptured; it was torn from the free margin to within two lines of the convex margin. Other organs were healthy.

A private Marine of the detachment stationed on the Island of San Juan de Fuca, presented himself in November 1868, complaining of cough, which he stated was of some eight or ten days' duration. He also complained of shortness of breathing, which he said he had suffered from for some time back. On stethoscopic examination of the chest, a loud cardiac bruit was distinctly audible over the greater part of the chest anteriorly, a prolonged murmur taking the place of the natural healthy sounds. There was also extensive cardiac dulness. The pulse was rapid, but not intermittent. Under the treatment to which he was subjected, some improvement took place in the cough, but the other symptoms remained unchanged. His appetite continued good until the 8th of December, when he was seized with vomiting and headache. He also experienced a bounding sensation in the cardiac region. A few days afterwards oedema of the face and trunk made its appearance, but there was none of the limbs. Towards the end of December he became very much worse; the pulse became more rapid and feeble, and he complained of general debility. His face became congested also. On the 8th of January 1869, the dyspnoea became very urgent, so much so that he was obliged to sit up in a chair, and in the evening of

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that day he died somewhat suddenly. The heart was found, on post-mortem examination of the body, to be greatly enlarged, with corresponding enlargement of its chambers. Its walls were considerably thickened. The heart was very flabby and coated with fat, and its muscular texture looked pale and unhealthy. It weighed twenty-three ounces. The valves were not diseased apparently, with the exception of the semilunar valves, which appeared somewhat shrivelled. The orifices were not contracted. The lungs were very much congested. The right lung was hepatised and contracted, and perfectly adherent to the walls of the chest by old adhesions, which could with difficulty be broken down.

The third fatal case also occurred in the person of a Marine. He belonged to the Zealous, and while in his mess, the vessel being at Valparaiso at the time, suddenly staggered and fell. Assistance was immediately rendered, but life was found to be extinct. On post-mortem examination, the body, externally, seemed perfectly healthy. On opening the pericardium, only the usual amount of serum was found. The heart was much enlarged, from hypertrophy of the left ventricle. The muscular tissue of the heart was healthy. The valves, with the exception of the semilunar ones, were healthy. Specks of bony deposit were found near the corpora aurantii of the semilunar valves. The aorta was much thickened, and at half an inch from the margin of the valves was converted into a ring of bone, from the amount of atheromatous matter which extended along the vessel. The right auricle and ventricle were filled with clotted blood. No aneurism nor other lesion existed.

A case of aneurism appears in Table V., in connection with the Charrydis. It occurred in the person of a petty officer, who had been placed on the sick-list on the 9th November, complaining of pain in the lower and posterior part of the left chest. With the exception of dyspeptic symptoms, there were no indications for treatment further than the application of fomentations to the chest and the exhibition of aperients. On the 21st of November, no improvement having taken place in his symptoms, a further examination was made, when, the surgeon observes, "abnormally distinct pulsation was felt over the whole course of the abdominal aorta, most distinct at the left side of, and superior to, the umbilicus. A bellows bruit was heard in the same situation, which could be heard also in the subclavian as well as in the femoral arteries. The pulsation in the iliac arteries, also, was increased. Indications of an indistinct tumour could be felt, of a spindle shape, and overlying the position of the aorta, superior to the umbilicus. The murmur in the situation of the tumour was noted to be synchronous with the pulse at the wrist. The physical signs at the cardiac region appeared to be natural, although the impulse was not perceptible to the finger, and the heart's sounds were perhaps wanting in force.

"He now gave the following statement of the commencement of his complaint:—Four days before he was put on the sick-list, he felt sick after drinking beer, and vomited. The vomiting was followed by pain in the epigastrium, which has continued in some degree ever since, but became suddenly much worse while running on shore at drill, on the

the day he was admitted to the list. The pain has had the character of a heavy weight, with a feeling of to-and-fro motion; becomes worse after taking food, on walking, or on pressure over its site; and is always referred to the same place, between the umbilicus and the false ribs on the left side. It is liable to recur in paroxysms, and is then relieved by the patient turning on the left side, and almost on the belly. Sometimes it passes to the back, to a spot within two inches of the spine, on the same level with that to which it is referred anteriorly.

"He is a man who looks rather old for his years (thirty-eight), but is fairly developed physically, except on the right side of the chest, where the ribs project anteriorly at the lower end of the sternum. No arcus senilis exists, and he denies ever having had venereal disease. The pulse is rather feeble, but beats regularly at 60."

He was kept under observation for some time, and ultimately discharged to the Naval Hospital at Greenwich, where he remained at the end of the year, his symptoms not having changed in any respect.

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V. and VI. Diseases of the Absorbent System and Ductless Glands.

Classes
V. and VI.

Thirty-five cases of sympathetic bubo, and one of adenitis appear under this head. Each case of the former affection was a little over thirty-three days, and the case of adenitis twenty-six days under treatment.

VII. Diseases of the Respiratory System.

Class VII.

Under this head 399 cases of catarrh; two of hæmoptysis; forty-five of various inflammatory diseases of the lungs were under treatment, and of the total number four were invalided and four proved fatal. As a rule the catarrhal cases were not of much importance. The surgeon of the *Topaze*, in which there were seventy-four cases, says that there was less evidence this year of their being connected with any malarial influences, than on former occasions.

In the *Zealous*, in which there were 103 cases, the staff surgeon observes, "There were numerous cases of catarrh; about one-eighth of the total sickness depended on this cause. They were not, however, generally severe cases, but were almost all brought on by exposure of some sort or other during the winter at Esquimaux, where they were one of the principal complaints; but they were easily cured and the treatment had nothing peculiar about it."

Of the four fatal cases, two were from pneumonia, one from bronchitis, and one from what was reported as congestion of the lungs. In this last case, however, the pulmonary affection appears to have been dependent upon cardiac and aortic disease. It occurred in the person of a Marine of the *Zealous* who, on the 9th of August, presented himself complaining of cold and cough. He was brought up to the sick-bay by his messmates who had seen that he had not been well for some days, but could not induce him to apply for treatment. He said that he had caught cold some days

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previously and had not been well since, that he had pain about the chest, and some difficulty of breathing, but he thought it would get better of itself. He had slight cough and some mucous expectoration. On examination by the stethoscope harsh respiration was heard nearly over the whole chest. No crepitation was distinguishable, and there was no dulness on percussion. The respiration was hurried, and he leaned forward to breathe more easily, as he said. He complained of pain at the upper part of the sternum. The heart's sounds gave no indication of disease. He was placed in bed, and ordered to have a mustard cataplasm applied between the shoulders, and a dose of diaphoretic mixture was given him containing five minims of tincture of digitalis. About half an hour after this he complained of increase of pain in the chest, and also at the pit of the stomach, and said that he had a feeling of choking in his throat. He got up to go to the water-closet which is at one end of the sick-bay, and while there asked some one to bring him a light. Before he could be reached he fell forward off the seat, and was taken up insensible. Every method was tried to produce re-animation, but in a few minutes the breathing ceased, and he was dead.

On post-mortem examination of the body fourteen hours after death, much frothy fluid was found issuing from the nose and mouth; the depending parts of the body were everywhere much discoloured, as also the left side of the face. The skin as well as the conjunctivæ had somewhat of a yellowish tinge. The body was well nourished and muscular. Large prominent veins were observed passing over the chest and shoulder of the left side. On making an incision over the sternum much fluid venous blood escaped, more particularly from the upper part, and blood flowed very freely as the incision was extended up the neck, from a large and prominent plexus of veins, occupying the base of the neck, and reaching forward over the trachea. On raising the sternum from its attachments, a very considerable quantity of serum was found in the cavities of the pleuræ and pericardium (subsequently some also was found in the abdominal cavity). The lungs on being removed showed evidence of considerable congestion, and there were one or two spots of recent adhesion, easily broken down. They were crepitant throughout, and there did not appear any traces of tubercle; on being cut into, the surfaces immediately presented a quantity of frothy fluid mixed with blood, and the colour was darker than natural. On removing the heart and aorta it was found that the heart was abnormally large; the walls of the right ventricle appeared very thin, and the cavity was distended, but otherwise the structure appeared healthy. It contained a clot evidently not recent, being nearly white. The auricle on the same side was healthy but contained a small clot. The pulmonary artery was normal. The left ventricle was very much dilated and hypertrophied, being nearly twice the natural size; but its structure, as far as could be seen, appeared healthy. The aortic valves were very much thickened, and it was evident that they could not close the orifice of the artery. The arch of the aorta was, however, the principal seat of the disease. It was dilated to an unusual extent, and the walls were very much roughened and atheromatous, and having several

several plates of bone dispersed about it in different parts. The dilatation extended all through the arch of the aorta downwards beyond that portion, to the descending part of the vessel. The trachea was very much congested, its inner surface being quite pink. The liver was rather roughened externally, and on being cut into was harder than natural. The other organs appeared healthy.

There were no points of particular interest in the other fatal cases.

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Class VII.

VIII. Diseases of the Digestive System.

Under this head 635 cases were entered on the sick-list, of which five were invalided and three proved fatal. The most prominent diseases numerically were cynanche, dyspepsia, and diarrhœa. With reference to the latter affection the surgeon of the *Charybdis*, in which vessel there were fourteen cases, observes, "The larger number of the cases of diarrhœa occurred at Valparaiso in the month of March immediately after our arrival there, when it appeared almost in an epidemic form for a short time." . . . "Slight fever was present in most of the cases; the discharges from the bowels were frequent and watery, attended with tenesmus, but never accompanied by blood, nor was vomiting present in any case. Diaphoretics and a few days' quiet in the hammock were generally found efficient to effect a cure in those so ill as to require to be placed on the sick-list."

He elsewhere makes the following observations on the water supply and general sanitary condition of Valparaiso, as bearing on the prevalence of bowel complaints and other affections. "The town of Valparaiso is placed at the base of a range of steep hills which run out from the mainland in a south-westerly direction. The principal streets run parallel with the seashore, and are built upon a narrow strip of level land facing northwards; between the sea and the hills, the inferior streets run back from these and ascend the steep sides of the hills more or less. The houses in these streets are of one storey, built upon the sides of ravines or 'quebradas,' and are nearly all composed of mud, with earth floors. The ravines are the common receptacle of refuse thrown out from these houses; no drainage exists except what the natural form of the surface affords. The consequence is that during the dry months an immense accumulation of the most offensive nature is formed in these hollows. It is not merely the refuse and offal from the houses that finds its way there, but human excreta abound in every corner. By the end of summer a great portion of these collections remain on the ground in a state of dust, and is readily dispersed by the strong gusts of wind common in the autumn, which sweep down the hills over the town, and across the bay. A little later, heavy rains wash what may be left, down to the lower level ground in the shape of filthy streams from each ravine, which at many points pass through the town in wide uncovered channels, and at length find an exit at the shore where much of the offensive material is deposited. The houses stand close upon the shore itself, which is in a most filthy state. It is used as the common latrine of the inhabitants, and as

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the most convenient place to throw out all carcasses of dead animals, offal, and refuse of every kind. The influence of a hot sun upon such accumulations can only result in the production of miasmata as deleterious to health as they are offensive to the sense of smell, and I think there is little doubt that they are frequently the cause of febricula and diarrhœa. The malaria is probably carried to the ships in the bay by the high winds, which are sufficiently strong to convey the dust of the town far into the harbour; but in addition to this possible source of infection it is highly probable that even a short exposure while on leave, to the more concentrated form of malaria prevailing, might be sufficient, especially in such places as seamen generally frequent, to produce in some all the symptoms referred to.

"The water used by our ships at Valparaiso is very far from being so good as it should be. I found it in March to contain a considerable sediment of decaying vegetable and other organic matter, with great numbers of animalculæ, including many varieties of entomostracæ, polypes, and annelidæ. The filtered water gave a copious brown deposit, with permanganate of potash.

"The arrangements for collecting and conveying the water to the ships appear to be very faulty. The water is principally derived from the surface drainage of the hills in the neighbourhood. This is collected in an open tank placed in one of the ravines nearly outside the town. On both sides of this ravine are several inhabited houses, standing in such a position that all matters thrown from them readily find their way into the tank, either carried there by the wind in the form of dust, or washed into it by heavy rains. Under these circumstances, and considering the dirty habits of the people, it is easy to see that the water collected in an open tank, the sides of which are not raised much above the immediately surrounding level, must contain large quantities of very offensive impurities.

"From the tank the water is conveyed to the shore through iron pipes, passing at a small distance under the surface of the ground through the town. It is then taken on board a sailing tank, and so brought to the different ships. The sailing tank too was far from being in a properly clean state, and the accumulation in it of dirt from various sources, added to the originally impure condition of the water.

"Occasionally a small quantity of water was condensed on board our ships at Valparaiso for drinking and cooking purposes, but the tank water was more frequently used. Water containing organic impurities, such as were evident in this, and especially under certain conditions of decomposition, the result of a high temperature, is a known fertile source of diarrhœa in those who make use of it; and it is also a well-known fact that by the habitual use of such water, the system may become accustomed to it, so that although the residents of the locality may use it with apparent impunity, it immediately produces in strangers symptoms indicative of more or less derangement or disease of the intestinal canal. Such, I believe, was the cause and source of many of the cases of diarrhœa which appeared in this ship, more especially, perhaps, of those that do not appear
on

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on the sick-list, which were much more numerous than the graver forms of the disease.

"Although in the present instance, from the want of sufficiently extended observations, there may be absence of conclusive proof of harm arising from the use of this water, yet it appears to me to be at some time a very likely source of much and serious disease. It cannot but happen that faecal dejections lying about on the ground above the tank, become mixed with the water it contains; and as it is known that fever of a typhoid form is a very prevalent disease amongst the inhabitants of Valparaiso, there is every risk of conveying that or other similar disease to those on board ship who make use of the water.

"The prevention of disease is a more desirable object to attain, and will always be found of much greater benefit to any body of people, than the cure of it. Here we seem to have an opportunity to make use of the knowledge at our command to arrive at so desirable an end. With that view it would, I consider, be a safe and wise measure to discontinue the use of this water, and as no better source of supply is to be found on shore at present, to use only condensed water, which I am informed can be made for about the same cost per ton as is paid for the tank water."

The surgeon of the Chanticleer says, in reference to some cases of diarrhoea that occurred on board that vessel at Valparaiso that they were "caused by change of diet, and the free use of fruit and vegetables, after having been for a long time previously on salt provisions. The water supplied to ships is very impure, strongly rankish, and contains chloride of sodium, and traces of sulphate of lime, but the crew at the time were using condensed water, so that this could not have been the cause. Several of these cases were accompanied by considerable gastric derangement, but readily yielded to treatment."

A fatal case of enteritis and gastritis occurred in the person of a petty officer of the Zealous. He was addicted to intemperance, and had been on shore on leave, where he was seen drunk, but on his coming off to the ship he was quite sober, and performed his duty for two days in apparently good health before the fatal attack set in. This occurred about two hours after eating a hearty supper consisting principally of beef, with mustard, vinegar, and pepper in considerable quantities. His first symptoms were intense abdominal pains, with cramps, and vomiting and purging. The vomiting ceased after all the food had been rejected. He never rallied from the first attack, although the pain under the influence of chlorodyne was much relieved. He sank after about thirty-six hours' illness. At first the attack very much resembled one of cholera, but some of the symptoms were very different from those frequent in that disease. The pulse at the wrist did not become smaller during the whole time, the skin retained its heat, and the kidneys performed their functions. There was no collapse.

On post-mortem examination of the body the whole digestive canal from the oesophagus to the rectum was found to be in a state of intense inflammation. The peritoneum did not appear to be

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included in the disease, but the mucous membrane from one end to the other showed signs of intense action, although there did not appear to be erosions on any part. The staff surgeon observes; "The cause of this sudden and fatal attack appears involved in complete mystery. The patient himself declared that he could not account for his illness, and there was no reason to suppose that anything abnormal had produced it, unless we lay it at the door of much vile stuff sold under the name of spirits, to which it was known that the unfortunate patient was somewhat addicted."

A fatal case of what is returned as dysentery occurred in the person of a seaman of the *Topaze*, but the symptoms were of a very anomalous character, and the pathological appearances on post-mortem examination of the body were rather those of enteritis than dysentery.

A fatal case of jaundice occurred in the person of a petty officer of the *Pylades*, who had led a very irregular life. He was entered on the sick-list on the 22nd of August complaining of constant cough, loss of appetite, and failing strength. Under the treatment to which he was subjected the catarrhal symptoms subsided, but the debility increased. On the 29th he complained of having passed a restless night, and the following night was also a bad one, there being some amount of wandering delirium. Well-marked symptoms of jaundice now set in, and in this state he was discharged to the Civil Hospital at Monte Video, where he expired on the 3rd of September. On the day following his discharge to hospital, the abdomen became tympanitic and tender all over; the stools were frequent, and debility increased; the urine was loaded with bile pigment, and the fæces presented a light clay colour. No examination of the body was made after death.

IX. and X. Diseases of the Urinary and Generative Systems.

Classes IX.
and X.

Under this head 149 cases of various forms of disease were placed on the sick-list, of which one was invalidated and one proved fatal. The most important affection numerically was gonorrhœa, of which there were eighty-six cases, the average duration of each case being twenty-five days.

The fatal case was one of waxy degeneration of the kidneys and liver. The patient, a non-commissioned officer of Marines of the *Reindeer* was placed on the sick-list on the 10th of June, with pains of a wandering character, affecting all his limbs as well as the lumbar region, and he had occasional shivering fits resembling ague. On testing his urine it was found to be loaded with albumen. In this condition he was discharged to the Civil Hospital at Valparaiso, where on admission he still complained of these symptoms, which he said were rheumatic. His countenance was very sallow, the tongue was red and glazed, with a tendency to dryness; the skin was dry but not preternaturally hot (a fact, however, which was not tested by the thermometer); the pulse was sharp, 86 per minute; the bowels were

were regular, and the heart-sounds normal. The urine was highly albuminous, the albumen occupying the space of half the quantity of urine examined, sp. gr. 1006. Under the microscope neither blood globules nor renal casts could be detected. There was no œdema of the extremities. On percussing the abdomen the liver could be felt very distinctly over a very extended space, and stretching across into the left hypochondrium, but it was not tender on pressure. On the 29th of June an attack of diarrhœa came on which was readily checked, but on the following day he complained of not being able to pass his urine. During the previous twelve hours he had only passed one ounce which was loaded with lithates, but it contained no blood nor casts. The pulse was 120, and the stomach very irritable, rejecting everything he took. He was ordered the effervescing tartrate of soda with hydrocyanic acid, and was packed in blankets. In this way he perspired profusely, and continued to do so until his death, but the suppression of urine continued. Uræmic poisoning now set in, his pulse became irregular, and convulsive twitchings of the extremities came on early in the morning of the 3rd of July; these increased during the day and following night, and at 8 a.m. of the 4th, after a violent epileptic convulsion, he died. There was no coma nor tendency to coma. Post-mortem examination of the body revealed most characteristic waxy degeneration of the liver and kidneys. Both organs were enormously large, the liver weighing 9 lbs. 10 oz., and the kidneys 1 lb. 11 oz. The spleen and pancreas were also very large.

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Station.Classes IX.
and X.

XI. Diseases of the Organs of Locomotion.

Under this head thirteen cases appear, all of which seem to have been discharged to duty after being on an average about twelve days under treatment. There was nothing of importance or interest in connection with them.

Class XI.

XII. and XIII. Diseases of the Cellular and Cutaneous Systems.

Seven hundred and forty-five cases of various forms of disease were entered on the sick-list under this head, and of these one was invalided and one proved fatal. There were altogether 564 cases of phlegmon and abscess, and 155 of ulcer; each case of the former affection being on an average between nine and ten days under treatment, and each case of the latter between twenty-two and twenty-three days.

Classes XII.
and XIII.

The fatal case was one of abscess of the cellular tissue behind the right kidney. It occurred in the person of a seaman of the Sparrowhawk, and was considered to be a case of hepatic abscess until post-mortem examination of the body revealed the true character of the disease. A collection of matter was found in the cellular tissue behind the right kidney, the liver being free from disease. The abscess had communicated through the diaphragm with the right lung, and also opened into the large intestine. The case is of sufficient

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cient interest to justify its being reported in the words of the medical officer* of the sick quarters at Esquimaux, where the man died. " . . . æt. twenty-five, was received on the 10th of February labouring under an obscure train of symptoms having reference seemingly to chronic hepatic disorder. He was sallow, sub-jaundiced, emaciated, and debilitated. There was pain and tenderness in the right hypochondrium and right lumbar region. The area of hepatic dulness was enlarged downwards, but there was no fulness nor bulging of the ribs. There were no chest symptoms, either manifest or revealed by the stethoscope. The appetite was bad, and the bowels irregular. He was treated at first with mineral acids and tonics. Aperients were at first required to procure regular action of the bowels; subsequently they became relaxed, and a troublesome diarrhœa was established which never altogether ceased, and contributed in a great measure to the fatal termination.

"About the 8th of March he first complained of cough accompanied with muco-purulent sputum. The latter was at first slight, but soon became profuse, consisting almost entirely of intensely fetid pus. The pain and tenderness in right hypochondrium and right flank were also much increased, so that the slightest touch caused great suffering. The weight of the bedclothes even caused annoyance, and the patient could not tolerate any prolonged examination either with stethoscope or by percussion. Loud coarse crepitation, amounting at times to gurgling, was heard, however, over the lower part of the right chest, and abscess connected with the liver was diagnosed, which was thought to have burst into the lung. Bed sores were established, and the patient was placed in an air-bed with great relief to his sufferings. On the 21st of March a sharp rigor, followed by increased pain and tenderness in the side took place, and from this date severe exacerbations of pain were frequent. The cough and sputum gradually diminished, and by the 27th of April had quite ceased; and, with the exception of the diarrhœa, his condition seemed to be improving. On the 7th of May œdematous swelling of the left foot and ankle was noticed. This gradually extended as high as the knee, but was, until within a few days of his death, confined to the left lower extremity. As there was also tenderness along the inner part of the left thigh this circumstance was thought to indicate venous obstruction, and the prelude of a pyæmic condition. The hypo-sulphate of soda was therefore prescribed, but with no very decided result. On the 1st of May, the patient noticed a discharge per anum which came on suddenly, and on examination proved to be sero-purulent matter; this discharge lasted for ten days, and was sufficient to saturate the clothes placed underneath to protect the bed. It was considered to be also the result of hepatic abscess bursting into the intestinal canal. The discharge from the lung, it will be observed, ceased a few days before this latter escape of matter per anum took place. Anodynes and astringents were now frequently necessary to allay distress and check diarrhœa, which had become exhaustive.

The

* Surgeon George Bellamy.

The patient took nourishment fairly, and a pint of wine daily, but his condition gradually became worse, and he sank from exhaustion on the 23rd of May.

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Classes XII.
and XIII.

“*Autopsy.*—Thirty-nine hours after death. *Body.*—Extremely emaciated. Lower limbs from knees downwards œdematous, left one mostly so. Abdomen quite flaccid, and free from flatus or collection of fluid. *Chest.*—Left lung healthy; the usual hypostatic congestion on the posterior aspect. Right lung, upper lobe healthy; lower lobe almost entirely disorganised from infiltration of purulent matter. It appeared to form the sac of an abscess which communicated, by a large ragged opening in the diaphragm, with another larger cavity below that organ. The middle lobe of the lung (right) was in part, healthy and crepitant, but its lower portion approximated in appearance to the lower lobe, being partially disorganised by the passage of pus through its tissue. No trace of tubercular matter was seen, but in many places the smaller bronchial passages terminated in ragged cavities partially filled with curdy pus which was highly fetid and appeared to be of old formation. *Liver.*—Rather larger than natural but healthy in structure, and free from abscess either primary or secondary. Posterior parts congested and of dark purple colour. On removing this organ, the right kidney was found to be lying in, or rather forming the anterior wall of a very large abscess, containing a quantity of thick grumous offensive pus. On the posterior aspect of the right kidney, about its centre, was a dark ecchymosed patch the size of half-a-crown; this appeared of old standing, and on making a section in a transverse direction, small patches of lymph were seen embedded in the cortical structure of the kidney; other parts of this organ were healthy. The abscess above mentioned appeared to be situated in the cellular tissue behind the kidney and extended from the margin of the lower rib above, to the crest of the ileum below. In the transverse direction it extended from the sides of the lumbar vertebræ to the outer border of the quadratus lumborum muscle. This muscle and those adjoining, viz., the psoas magnus, iliacus internus, and the mass of muscular substance forming the erector spinæ, were blackened, softened, and in a great measure disorganised from the prolonged contact of purulent matter. The bones in the vicinity, corresponding to the circumference of the abscess, were all affected with superficial necrosis, being denuded of periosteum and of a black colour. Thus, the lower margin of the last rib, the transverse processes of the five lumbar vertebræ, the upper border of the crista ili, as well as a portion of the ventral surface of the iliac bone were all superficially necrosed, the diseased state being apparently secondary to the formation of the abscess. A large ragged opening existed in the diaphragm corresponding to the passage of the muscular structures (psoas magnus, &c.) through that organ, being situated altogether behind the liver and peritoneum. Through the opening, which would admit three fingers readily, pus flowed freely on making pressure on the kidney below. Two or three perforations also existed in the muscles above named, by which the pus found its way to the subcutaneous cellular tissue in the right lumbar region, accounting for the pain, tenderness, and tumefaction observed in

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that locality during life. The colon, at the point where it first impinges on the kidney in its upward course, was found glued to the cellular tissue around that organ, and a small opening existed about the size of a pea, by which pus found its way from the cavity of the abscess into the interior of the canal accounting for the discharge of pus per anum during life.

"Other organs healthy in chest and abdomen. Head not examined. Bladder contained about eight ounces of urine."

Unclassed Diseases.

Twenty-nine cases were entered on the sick-list under this head, of which two were invalided, and one proved fatal. The fatal case was one of delirium tremens.

Delirium Tremens.—There were three cases of this degrading disease under treatment, of which, one occurred in the person of a commissioned officer, one in a Marine, and one in a bandsman. In the case of the officer the disease proved fatal.

Alcoholic Poisoning.—Five cases of alcoholism were under treatment, four occurring in the persons of Marines and one in an able seaman, all of the Satellite. The irritability of the stomach in these cases seems to have been speedily overcome by the application of sinapisms to the epigastrium, and the exhibition of a mixture containing powdered capsicum, citric acid, sugar, and water.

Wounds and Injuries.

A petty-officer was killed by the accidental discharge of a comrade's rifle; and another petty-officer sustained fatal fracture of the skull by a blow from the tiller. A man sustained fatal fracture of the spine by falling from a height of about forty feet from a tree up which he had climbed in search of fruit; and a man was killed by falling from aloft, his skull being extensively fractured.

Three men were accidentally drowned, one in bathing from the ship; one by being capsized in a canoe; and in the third instance, the man was found drowned. A man, in a fit of temporary insanity it is supposed, committed suicide by jumping overboard.

The total number of deaths was thirty, which is in the ratio of 12·8 per 1,000, being an increase compared with the preceding year equal to 4·8 per 1,000.

Invaliding.

In General Diseases, Section A., one person was invalided for ague; and in Section B., six persons were invalided for rheumatism; two for primary syphilis; four for secondary syphilis; two for scrofula; and ten for phthisis pulmonalis. Eleven persons were invalided for diseases of the nervous system, and organs of the
special

special senses; eight for diseases of the circulatory system; four for diseases of the respiratory system; five for diseases of the digestive system; one for diseases of the urinary and generative system; one for diseases of the cellular tissue and cutaneous system; two for unclassified diseases; and two for the results of wounds and injuries. The total number invalided was fifty-nine, which is in the ratio of 25·3 per 1,000 of force, being a reduction, compared with the preceding year, equal to 12·2 per 1,000.

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TABLE, No. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Small-pox - - - -	20	8.5	—	—	—	—
Enteric Fever - - -	3	1.2	—	—	2	.8
Simple continued Fever - - -	70	30.	—	—	1	.4
Ague - - - - -	13	5.5	1	.4	—	—
Remittent Fever - - - -	4	1.7	—	—	—	—
Erysipelas - - - -	1	.4	—	—	—	—
II. General Diseases, Section B.:						
Rheumatism - - - -	197	84.5	6	2.5	—	—
Gout - - - - -	2	.8	—	—	—	—
Syphilis {Primary - - - -	177	75.9	2	.8	—	—
{Secondary - - - -	99	42.4	4	1.7	—	—
Scrofula - - - - -	1	.4	2	.8	—	—
Phthisis Pulmonalis - - -	9	3.8	10	4.2	4	1.7
Dropsy - - - - -	1	.4	—	—	—	—
III. Diseases of the Nervous System and Organs of the Special Senses:						
Sunstroke - - - - -	1	.4	—	—	—	—
Paralysis - - - - -	4	1.7	—	—	—	—
Vertigo - - - - -	3	1.2	1	.4	—	—
Epilepsy - - - - -	8	3.4	4	1.7	—	—
Neuralgia - - - - -	14	6.	—	—	—	—
Insanity - - - - -	1	.4	2	.8	—	—
Diseases of the Brain - - -	—	—	1	.4	2	.8
Diseases of the Nervous System	3	1.2	—	—	—	—
Diseases of the Eye - - -	30	12.8	3	1.2	—	—
Diseases of the Ear - - -	5	2.1	—	—	—	—
Diseases of the Nose - - -	2	.8	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the Heart { Functional -	6	2·6	—	—	—	—
{ Organic -	8	3·4	6	2·6	3	1·2
Aneurism - - - -	1	·4	—	—	—	—
Varicose Veins - - -	3	1·2	2	·8	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	35	15·	—	—	—	—
Glandular Diseases - -	1	·4	—	—	—	—
VII. Diseases of the Respiratory System:						
Catarrh - - - -	399	171·2	—	—	—	—
Hæmoptysis - - - -	2	·8	1	·4	—	—
Diseases of the Lungs - -	45	19·3	3	1·2	4	1·7
VIII. Diseases of the Digestive System:						
Cynanche - - - -	94	40·3	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - -	2	·8	—	—	—	—
Dyspepsia - - - -	189	81·1	1	·4	—	—
Dysentery - - - -	4	1·7	—	—	1	·4
Diarrhœa - - - -	262	112·4	—	—	—	—
Colic and Constipation - -	47	20·1	—	—	—	—
Hæmorrhoids - - - -	10	4·2	—	—	—	—
Hernia - - - -	4	1·7	1	·4	—	—
Worms - - - -	7	3·	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	4	1·7	2	·8	1	·4
Diseases of the Liver, Spleen, &c. - - - -	12	5·1	1	·4	1	·4
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	4	1·7	—	—	1	·4
Diseases of the Bladder - -	1	·4	—	—	—	—
Gonorrhœa - - - -	86	36·9	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems—<i>continued</i>.						
Diseases of the Organs of Generation - - - -	2	·8	—	—	—	—
Stricture - - - -	16	6·8	1	·4	—	—
Varicocele - - - -	1	·4	—	—	—	—
Orchitis - - - -	39	16·7	—	—	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c. - - - -	13	5·5	—	—	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	564	242·	—	—	1	·4
Ulcer - - - -	155	66·5	1	·4	—	—
Carbuncle - - - -	1	·4	—	—	—	—
Diseases of the Skin - -	24	10·3	—	—	—	—
Scabies - - - -	1	·4	—	—	—	—
Unclassed:						
Debility - - - -	21	9·	2	·8	—	—
Delirium Tremens - - -	3	1·2	—	—	1	·4
Poisoning by Alcohol - -	5	2·1	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	628	269·5	2	·8	4	1·7
Burns and Scalds - - -	18	7·7	—	—	—	—
Suicide - - - -	—	—	—	—	1	·4
Submersion and Drowning -	5	2·1	—	—	3	1·2
TOTALS - - -	3,390	1454·5	59	25·3	30	12·8

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-pox - - - -	739	149	888	2.4	1.
Enteric Fever - - -	12	44	56	.1	—
Simple continued Fever -	640	35	675	1.8	.7
Ague - - - -	166	49	215	.5	.2
Remittent Fever - - -	259	-	259	.7	.3
Erysipelas - - - -	5	-	5	—	—
II. General Diseases, Section B.:					
Rheumatism - - - -	2,313	994	3,307	9.	3.8
Gout - - - -	8	-	8	—	—
Syphilis { Primary - - -	4,198	1,966	6,164	16.8	7.2
{ Secondary - - -	3,398	1,162	4,560	12.4	5.3
Scrofula - - - -	45	66	111	.3	.1
Phthisis Pulmonalis - -	454	194	648	1.7	.7
Dropsy - - - -	4	-	4	—	—
III. Diseases of the Nervous System and Organs of the Special Senses:					
Sunstroke - - - -	3	-	3	—	—
Paralysis - - - -	68	64	132	.3	.1
Vertigo - - - -	15	-	15	—	—
Epilepsy - - - -	113	151	264	.7	.3
Neuralgia - - - -	168	-	168	.4	.1
Insanity - - - -	35	37	72	.1	—
Other diseases of the Brain -	-	154	154	.4	.1
Diseases of the Nervous System	16	-	16	—	.6
Diseases of the Eye - -	471	60	531	1.4	—
Diseases of the Ear - -	37	-	37	.1	—
Diseases of the Nose - -	11	-	11	—	—

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System :					
Disease of the { Functional -	122	- -	122	·3	·1
Heart - { Organic -	193	52	245	·6	·2
Aneurism - - -	27	26	53	·1	—
Varicose Veins - - -	66	- -	66	·1	—
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - -	1,162	- -	1,162	3·1	1·3
Glandular Diseases - -	23	3	26	—	—
VII. Diseases of the Respiratory System :					
Catarrh - - - -	2,731	10	2,741	7·5	3·2
Hæmoptysis - - -	11	-	11	—	—
Other Diseases of the Lungs -	797	498	1,295	3·5	1·5
VIII. Diseases of the Digestive System :					
Cynanche - - - -	374	- -	374	1·	·4
Dyspepsia - - - -	1,021	89	1,110	3·	1·2
Dysentery - - - -	72	- -	72	·1	—
Diarrhoea - - - -	1,305	4	1,309	3·5	1·5
Colic and Constipation - -	154	- -	154	·4	·1
Hæmorrhoids - - - -	90	- -	90	·2	—
Hernia - - - -	89	23	112	·3	·1
Worms - - - -	25	- -	25	—	—
Other Diseases of the Stomach	101	215	316	·8	·3
Diseases of the Mouth, Teeth, &c. - - - -	7	- -	7	—	—
Diseases of the Liver, Spleen, &c. - - - -	311	- -	311	·8	·3

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys -	22	17	39	.1	—
Diseases of the Bladder -	7	17	24	—	—
Gonorrhœa - - -	2,022	128	2,150	5.8	2.4
Diseases of the Organs of Generation - - -	18	-	18	—	—
Stricture - - - -	294	268	562	1.5	.6
Varicocele - - - -	232	-	232	.6	.2
Orchitis - - - -	448	134	582	1.5	.6
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - -	155	-	155	.4	.1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	4,906	274	5,270	14.4	6.1
Ulcer - - - -	3,208	268	3,476	9.5	4.
Carbuncle - - - -	62	-	62	.1	—
Diseases of the Skin - -	683	109	792	2.1	.9
Scabies - - - -	2	2	4	—	—
Unclassed:					
Debility - - - -	317	11	328	.8	.3
Delirium Tremens - -	9	-	9	—	—
Wounds and Injuries:					
Wounds, Injuries, &c. - -	6,631	1,120	7,751	21.2	9.
Burns and Scalds - -	187	-	187	.5	.2
Poisoning by Alcohol - -	26	-	26	—	—
TOTALS - - -	41,178	8,393	49,571	185.8	58.2

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship employed on the PACIFIC STATION.

CAUSE OF INVALIDING.	Camelion.	Chanticleer.	Charybdis.	Malacca.	Nereus.	Pyiades.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	TOTAL.
I. General Diseases, Section A.:													
Ague - - - - -	-	1	-	-	-	-	-	-	-	-	-	-	1
II. General Diseases, Section B.:													
Rheumatism - - -	-	-	3	-	-	1	-	-	1	1	-	-	6
Syphilis { Primary - -	-	-	1	-	1	-	-	-	-	-	-	-	2
{ Secondary - -	-	-	-	-	-	-	1	-	-	1	2	-	4
Scrofula - - - -	-	-	1	1	-	-	-	-	-	-	-	-	2
Phthisis - - - -	2	1	1	-	-	1	2	-	-	-	-	3	10
III. Diseases of the Nervous System and Organs of the Special Senses:													
Vertigo - - - -	-	-	1	-	-	-	-	-	-	-	-	-	1
Epilepsy - - - -	1	-	-	-	-	-	-	-	-	1	-	2	4
Insanity - - - -	-	-	-	-	-	-	-	-	-	-	-	2	2
Other diseases of the Brain -	-	-	-	-	-	-	-	1	-	-	-	-	1
Diseases of the Eye - -	-	-	2	-	-	-	-	-	-	-	-	1	3
IV. Diseases of the Circulatory System:													
Disease of the Heart, Organic	2	-	1	1	-	2	-	-	-	-	-	-	6
Varicose Veins - - -	-	1	-	-	1	-	-	-	-	-	-	-	2
VII. Diseases of the Respira- tory System:													
Hæmoptysis - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Other Diseases of the Lungs	-	-	1	-	1	-	-	-	-	-	-	1	3

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued*.

CAUSE OF INVALIDING.	Camelion.	Chaicleet.	Charybdis.	Malacca.	Nereus.	Pylades.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	TOTAL.
VIII. Diseases of the Digestive System:													
Dyspepsia - - - -	-	1	-	-	-	-	-	-	-	-	-	-	1
Hernia - - - -	-	1	-	-	-	-	-	-	-	-	-	-	1
Other Diseases of the Stomach, Intestines, &c. -	-	1	-	-	-	-	-	-	-	-	1	-	2
Diseases of the Liver, &c. -	-	-	-	-	-	1	-	-	-	-	-	-	1
IX. & X. Diseases of the Urinary and Generative Systems:													
Stricture - - - -	-	-	-	-	-	-	-	-	-	-	-	1	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:													
Ulcer - - - -	-	-	-	-	-	-	-	-	-	-	-	1	1
Unclassed:													
Debility - - - -	-	2	-	-	-	-	-	-	-	-	-	-	2
Wounds and Injuries:													
Wounds - - - -	-	-	-	1	-	-	-	-	-	-	-	1	2
TOTAL - - -	5	8	11	3	3	5	4	1	1	3	3	12	59

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the PACIFIC STATION.

CAUSE OF DEATH.	Cameleon.	Chanticleer.	Charybdis.	Marines, San Juan.	Pylades.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	TOTAL.
I. General Diseases, Section A.:												
Enteric Fever - - -	-	-	-	-	-	-	-	-	-	1	1	2
Simple Continued Fever -	-	-	-	-	-	-	1	-	-	-	-	1
II. General Diseases, Section B.:												
Phthisis - - - -	-	-	-	-	-	-	2	-	-	-	2	4
III. Diseases of the Nervous System and Organs of the Special Senses:												
Diseases of the Brain - -	-	1	-	-	-	1	-	-	-	-	-	2
IV. Diseases of the Circulatory System:												
Disease of the Heart, Organic -	-	1	-	1	-	-	-	-	-	1	-	3
VII. Diseases of the Respiratory System:												
Diseases of the Lungs - -	-	1	-	-	-	-	-	-	-	2	1	4
VIII. Diseases of the Digestive System:												
Dysentery - - - -	-	-	-	-	-	-	-	-	-	1	-	1
Other Diseases of the Stomach, Intestines, &c. - - -	-	-	-	-	-	-	-	-	-	-	1	1
Jaundice - - - -	-	-	-	-	1	-	-	-	-	-	-	1

TABLE, NO. 4.—Showing the Number of Deaths in each Ship, &c.—*continued.*

CAUSE OF DEATH.	Cameleon.	Chanticleer.	Charybdis.	Marines, San Juan.	Pyades.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	TOTAL.
IX. & X. Diseases of the Urinary and Generative Systems :												
Disease of the Kidneys - -	-	-	-	-	-	1	-	-	-	-	-	1
XII. & XIII. Diseases of the Cel- lular Tissue and Cutaneous System :												
Abscess - - - - -	-	-	-	-	-	-	-	-	1	-	-	1
Unclassed :												
Delirium Tremens - - -	1	-	-	-	-	-	-	-	-	-	-	1
Wounds and Injuries :												
Wounds, &c. - - - -	1	2	-	-	-	-	-	1	-	-	-	4
Suicide - - - - -	-	-	-	-	-	-	-	-	-	-	(a)1	1
Submersion and Drowning -	-	-	1	1	-	-	-	-	-	1	-	3
TOTAL - - -	2	5	1	2	1	2	3	1	1	6	6	30

(a) By drowning.

TABLE, No. 5. - - - - -
 SHOWING the Number of CASES of all DISEASES and INJURIES - - -

DISEASE OR INJURY.	Boxer.	Camelton.	Chanticleer.	Charybdis.	Malacoa.
I. General Diseases, Section A.:					
Small-pox - - - - -	-	20	-	-	-
Enteric Fever - - - - -	-	-	-	-	-
Simple Continued Fever - - - - -	4	28	12	3	-
Ague - - - - -	-	-	10	-	-
Remittent Fever - - - - -	-	-	-	-	3
Erysipelas - - - - -	-	-	-	-	-
II. General Diseases, Section B.:					
Rheumatism - - - - -	1	13	15	30	19
Gout - - - - -	-	-	-	-	-
Syphilis { Primary - - - - -	1	4	8	15	8
{ Secondary - - - - -	2	-	1	10	14
Scrofula - - - - -	-	-	-	-	1
Phthisis Pulmonalis - - - - -	-	2	1	1	-
Dropsy - - - - -	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:					
Sunstroke - - - - -	-	-	-	-	-
Paralysis - - - - -	-	-	-	-	-
Vertigo - - - - -	-	-	2	1	-
Epilepsy - - - - -	1	2	1	-	-
Neuralgia - - - - -	2	-	-	-	-
Insanity - - - - -	-	-	-	-	-
Diseases of the Nervous System - - - - -	-	-	1	(a) 1	-
Diseases of the Eye - - - - -	-	2	1	3	4
Diseases of the Ear - - - - -	-	-	-	2	1
Diseases of the Nose - - - - -	1	-	-	-	-
IV. Diseases of the Circulatory System:					
Disease of the { Functional - - - - -	-	-	-	2	-
{ Organic - - - - -	-	2	1	-	1
Aneurism - - - - -	-	-	-	1	-
Varicose Veins - - - - -	-	-	1	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - - - -	1	2	5	6	6
Glandular Diseases - - - - -	1	-	-	-	-
VII. Diseases of the Respiratory System:					
Catarrh - - - - -	-	16	19	29	28
Hæmoptysis - - - - -	-	-	-	-	-
Other Diseases of the Lungs - - - - -	6	2	7	9	2

(a) Myelitis.

TABLE, No. 5.
in the Ships employed on the PACIFIC STATION.

Marines, San Juan.	Nereus.	Pythias.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	TOTAL.
-	-	-	-	-	-	-	-	-	20
-	-	-	-	-	-	-	1	2	3
-	3	-	1	16	1	2	3	-	70
-	-	-	-	1	-	-	-	-	13
-	-	1	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	1
3	-	5	24	-	18	16	9	44	197
-	-	-	-	1	-	-	-	1	2
1	9	9	6	1	10	2	38	66	177
-	5	-	5	-	6	10	28	17	99
-	-	-	-	-	-	-	-	-	1
-	-	1	1	1	-	-	-	2	9
-	-	-	1	-	-	-	-	-	1
1	-	-	-	-	-	-	-	-	1
-	-	1	1	-	1	-	-	1	4
-	-	-	1	-	-	-	-	-	3
-	-	-	-	-	-	1	-	2	8
1	5	1	1	1	1	-	2	-	14
-	-	-	-	-	-	-	-	1	1
-	-	-	(b) 1	-	-	-	-	-	3
-	-	-	1	2	2	4	1	10	30
-	-	-	-	-	-	-	-	2	5
-	-	-	-	-	-	1	-	-	2
-	-	1	1	-	-	-	-	2	6
-	-	2	-	-	-	-	1	1	8
-	1	-	-	1	-	-	-	-	1
-	-	-	-	-	-	-	-	-	3
1	-	3	4	1	-	-	1	5	35
-	-	-	-	-	-	-	-	-	1
3	3	17	44	4	33	26	74	103	399
-	-	-	2	-	-	-	-	-	2
-	4	2	-	-	-	2	4	7	45

(b) Embolism.

TABLE, No. 5.—Showing the Number of Cases of all Diseases and

DISEASE OR INJURY.	Bozer.	Cameleon.	Chanticleer.	Charybdis.	Malacca.
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	1	3	3	11	6
Diseases of the Mouth, Teeth, &c. - - -	-	-	-	-	-
Dyspepsia - - - - -	-	4	21	5	11
Dysentery - - - - -	-	-	-	2	-
Diarrhœa - - - - -	-	9	23	14	20
Colic and Constipation - - - - -	-	2	13	1	2
Hæmorrhoids - - - - -	-	1	2	1	1
Hernia - - - - -	1	1	1	-	-
Worms - - - - -	-	-	1	-	-
Other Diseases of the Stomach, Intestines, &c. - - -	-	-	2	-	-
Diseases of the Liver, Spleen, &c. - - -	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems :					
Diseases of the Kidneys - - - - -	-	1	-	-	-
Diseases of the Bladder - - - - -	-	-	-	1	-
Gonorrhœa - - - - -	1	1	11	11	5
Diseases of the Organs of Generation - - -	-	-	-	-	-
Stricture - - - - -	-	-	1	2	-
Varicocæle - - - - -	-	-	-	-	1
Orchitis - - - - -	-	1	4	2	4
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones, Joints, &c. - - -	-	3	2	-	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - - - - -	7	48	52	61	19
Ulcer - - - - -	-	10	15	18	9
Diseases of the Skin - - - - -	-	3	2	2	2
Carbuncle - - - - -	-	-	-	-	-
Scabies - - - - -	-	-	-	-	-
Unclassed :					
Debility - - - - -	-	-	3	-	5
Delirium Tremens - - - - -	-	1	-	-	-
Poisoning by Alcohol - - - - -	-	-	-	-	-
Wounds and Injuries :					
Wounds, &c. - - - - -	7	62	49	57	31
Burns and Scalds - - - - -	-	2	2	2	-
Submersion and Drowning - - - - -	-	-	-	1	-
TOTAL - - -	37	245	292	304	204

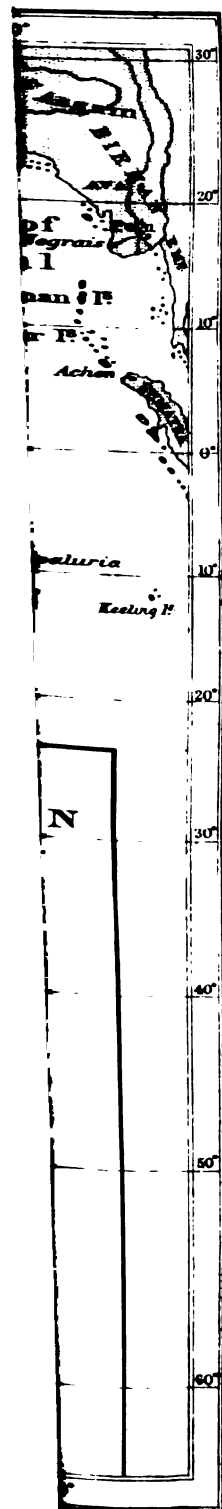
Injuries in the Ships employed on the Pacific Station—*continued*.

Marines, San Juan.	Nereus.	Pyiades.	Reindeer.	Ringdove.	Satellite.	Sparrowhawk.	Topaze.	Zealous.	Total.
4	-	3	3	2	11	5	13	29	94
-	-	-	-	-	-	-	-	2	2
4	1	2	18	4	17	15	16	71	189
-	-	1	-	-	-	-	1	-	4
1	4	10	15	39	15	4	40	68	262
1	-	1	1	10	6	3	4	3	47
-	-	1	1	1	-	1	1	-	10
-	-	-	-	-	-	-	-	1	4
-	-	-	-	-	3	2	-	1	7
-	-	-	-	-	-	-	-	2	4
-	-	2	-	2	1	3	-	4	12
-	-	-	-	-	-	-	-	-	-
-	-	-	1	-	-	1	-	1	4
-	-	-	-	-	-	-	-	-	1
-	4	1	5	2	4	4	12	25	86
-	-	-	-	-	-	1	-	1	2
-	-	-	-	1	1	-	4	7	16
-	-	-	-	-	-	-	-	-	1
1	-	3	1	1	2	-	5	15	39
-	-	-	-	-	-	-	-	-	-
-	-	1	-	1	4	-	1	-	13
-	-	-	-	-	-	-	-	-	-
7	5	30	23	35	62	25	69	21	564
1	-	8	4	7	29	2	26	126	155
2	-	-	-	-	5	4	-	4	24
-	-	-	-	-	1	-	-	-	1
-	-	-	-	-	-	-	-	1	1
-	-	-	-	-	-	-	-	-	-
-	-	1	4	4	3	-	-	1	21
-	-	-	-	-	1	-	1	-	3
-	-	-	-	-	5	-	-	-	5
-	-	-	-	-	-	-	-	-	-
19	4	25	34	13	45	19	83	180	628
1	-	-	2	-	1	-	2	6	18
1	-	-	-	-	-	1	1	1	5
52	48	132	206	151	288	154	441	836	3,390

TABLE, No. 6.

Showing the Names of the SHIPS; the Average Complements, &c.; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily, in each SHIP; and the Number Discharged to Hospital.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	Period.	Average Complements.	Average Complements, corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
Iron-clad -	Zalous -	Devonport -	18 Sept. 1866	20	3,716	S. 800	Year - -	535	535	836	8,463	23·1	43·1	43
Fourth Rate -	Topaze -	Devonport -	26 Jan. 1866	31	2,659	S. 600	1 Jan. to 30 June	490	245	441	5,198	14·2	57·9	11
Sixth Rate -	Charybdis -	Sheerness -	7 Jan. 1867	18	1,506	S. 400	Year - -	268	260	304	5,539	15·1	58·	17
	Malacca -	Portsmouth -	13 Nov. 1865	13	1,034	S. 200	1 Jan. to 30 June	205	100	204	2,829	7·2	72·	11
	Pyldes -	Sheerness -	7 Dec. 1867	17	1,728	S. 350	1 Jan. to 30 Sept.	260	195	132	2,406	6·5	33·3	3
	Satellite -	Devonport -	30 Oct. 1866	21	1,462	S. 400	Year - -	255	255	288	4,030	11·	43·1	10
Sloop -	Camelion -	Sheerness -	7 May 1867	7	952	S. 200	Year - -	160	160	245	3,042	8·3	51·8	1
	Chaoticler -	Woolwich -	4 April 1867	7	950	S. 200	Year - -	180	150	292	3,148	8·6	57·3	12
	Reinder -	Chatham -	30 Oct. 1866	7	953	S. 200	Year - -	170	125	206	1,656	4·5	36·	7
Gun Vessel -	Boxer -	Woolwich -	14 Nov. 1868	4	465	S. 120	1 July to 31 Dec.	135	35	37	650	1·7	48·5	3
	Ringdove -	Portsmouth -	26 Oct. 1868	3	646	S. 160	1 Apr. to 31 Dec.	80	60	151	1,246	3·4	56·6	-
	Sparrowhawk -	Esquimault -	18 Aug. 1868	4	676	S. 200	Year - -	90	90	154	1,448	3·9	43·3	4
Store Ship -	Narcus -	Valparaiso -	1 April 1868	6	1,094	-	Year - -	40	40	48	812	2·2	55·	4
Marine Detachment, San Juan -	-	-	-	-	-	-	Year - -	70	70	52	746	2·	29·5	-



WEST COAST OF AFRICA AND CAPE OF GOOD HOPE STATION.

IN the year 1869 the Cape of Good Hope was separated from the East Indies Station, and added to the West Coast of Africa Station, and the boundaries of the united Cape of Good Hope and West Coast of Africa Station were defined as follows:—

West Coast
of Africa
and Cape of
Good Hope
Station.
— .

North.—By the parallel of 20° N. in the Atlantic, and by parallel of 23° 30' S. in the Indian Ocean.

East.—By 95° E. longitude.

South.—By the Antarctic Circle.

West.—By 26° W. longitude.

The squadron on the station comprised twenty vessels, viz.:—three of the sixth-rate; one sloop; nine gun-vessels; two steam vessels; one receiving ship permanently stationed in Simon's Bay; and four store ships, one of which was permanently stationed at Ascension, and another at Jellah Coffee. The returns from eleven of these vessels are for the whole year, and from the remainder for periods varying from two to nine months. The mean force corrected for time was 1,730, and the total number of cases of disease and injury entered on the sick-list, 2,795, which is in the ratio of 1615·6 per 1,000 of force, being a reduction, compared with the preceding year, equal to 248·1 per 1,000. Of these 112 were invalided, and eighteen proved fatal, the former being in the ratio of 64·7, and the latter of 10·4 per 1,000. Compared with the preceding year, there was a reduction in the invaliding rate to the extent of 19·5, and in the ratio of mortality of 2·6 per 1,000.

The average number of men sick daily from Class I., General Diseases, Section A., was in the ratio of 7·8 per 1,000, and from Section B., 8·9. From diseases of the nervous system and organs of the special senses, the average daily sick rate was 1·5; of the circulatory system, ·4; of the absorbent system and ductless glands, 1·2; of the respiratory system, 2·7; of the digestive system, 5; of the urinary and generative systems, 4·4; of the organs of locomotion, ·4; of the cellular tissue and cutaneous system, 10·5; from unclassified diseases, 1·5; and from wounds and injuries of various kinds, 9·3. The average number of men daily sick was 98·8, which is in the ratio of 57·1 per 1,000, which is a fractional increase compared with the preceding year.

West Coast
of Africa
and Cape of
Good Hope
Station.

Class I.
Sect. A.

I. General Diseases.—Section A., or Febrile Group.

Under this head 347 cases of various forms of disease were entered on the sick-list, viz. :—124 of simple continued fever; twenty-one of ague; 199 of remittent fever; one of mumps, and two of erysipelas; and of these, one of simple continued fever, two of ague, eighteen of remittent fever, and one of erysipelas, were invalided, and three of remittent fever proved fatal. Each case of simple continued fever was on an average a little over seven days under treatment: each case of ague between eleven and twelve days; each case of remittent fever about twenty days; the case of mumps thirteen days, and each case of erysipelas three days.

Simple continued Fever.—The Fly, the Myrmidon, and the Pandora were the vessels in which this form of fever prevailed in greatest numbers. They were, however, as a rule, of so little importance, that but little information is given in connection with them. They were mainly attributable to insolation, and to exposure to alternations of temperature.

Ague.—There was very little ague on the station, the vessels showing the largest number of cases being the Danaë and the Pioneer, in both of which vessels they were very few and of little importance.

Remittent Fever.—There were seven cases of this form of fever in the Danaë, three of which were contracted at Fernando Po, and the remainder at Lagos. The three cases at Fernando Po occurred in the persons of two officers, one attack being a relapse. In the first case the officer had been constantly employed on shore for two months building a coal-shed. A few days previous to the vessel leaving Fernando Po, he had gone by boat round the island, and one night encamped near a river in Melville Bay, where the ground was low. The surgeon* of the vessel says, “. . . it is very probable that during this time the malarious poison was taken into the system, his health being previously undermined by fatigue and exposure to the sun; the period of incubation, therefore, was nine days. In this case there was much irritability of stomach, and not till sinapisms were applied to the pit of the stomach could it be allayed . . . he remained under treatment nine days.” The next case was also in the person of an officer, who had been in the habit of taking almost daily fatiguing exercise in walking up to the sanatorium at Bassile, in Fernando Po. In the expedition round the island he accompanied the officer whose case has just been referred to, and they were both attacked within a day of each other. In this case there was very little sickness, and the patient was seven days under treatment. The third case, as has been previously observed, was a relapse. It occurred in the person of the officer first attacked, who, through his importunity, had probably been discharged

* Surgeon J. F. Mitchell.

charged to duty too soon. Seven days afterwards he imprudently went on shore at Accra, and exposed himself to the sun, the result of which was a recurrence of the febrile affection. The other four cases of remittent fever in this vessel occurred in the Michaelmas quarter of the year, and were attributable to exposure in the Lagos lagoon.

West Coast
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Station.

Class I.
Sect. A.

There were fifty-two cases of remittent fever in the Fly, of which one proved fatal. Forty-four of these occurred during the Christmas quarter under the following circumstances, as narrated by the medical officer* of the vessel. "Having left Loando on the 5th of November, we reached the River Congo on the 11th, and proceeded to Banana Creek to coal. We remained here until the 15th, lashed alongside the pier, exposed to the emanations of a swampy creek about sixty yards to windward, which separates the English from the Dutch factory. This creek is influenced by the tide, and at low water its banks are exposed, consisting of black soft mud, fringed with mangrove bushes (the creek is about forty yards in width); this being acted on by a powerful sun (thermometer 87°) emits a most disagreeable odour, as I have personally experienced. From the close proximity of this creek, the people in the English factory suffer a good deal from ague, whilst the people in the other factories to windward of the swamp enjoy good health. We left Banana Creek on the 15th for Punta da Linha, a settlement thirty-eight miles up the river from its mouth; it is situated on the right bank of the river, and consists of a number of factories, English, French, and Portuguese, who carry on a large trade with the natives in ground-nuts and palm kernels. The country between Banana and Punta da Linha is thickly wooded, and, inland, is hilly. The banks of the river are low and very swampy, and covered with mangrove bushes and large mangrove trees. The river here is intersected by numerous creeks. We left on the following day for Embomah, thirty-six miles higher up, which we reached the same day. The intervening country is for the first twenty miles swampy and thickly wooded; for the remainder it is open, thinly wooded, and appears to be well cultivated; it is also very hilly. At Embomah there are a few small branch factories, the people there being agents of those at Punta da Linha and Banana Creek; the settlement is close to the water's edge; the traders are mostly Portuguese. The place, while we were there, was considered by the residents to be very healthy. The river here is nearly three miles in width, and contains a number of islands. The current was about three knots whilst we lay there, bearing down numerous floating islands, which renders navigation at times dangerous. We remained at Embomah from the 17th to the 22nd of November, anchored within forty yards of the shore, which was lined at intervals with reeds. Whilst we lay there, a party of men were employed on shore, working under cover at the rigging and sails. These men received five grains of quinine before going on shore, and also on their return on board

* Assistant Surgeon E. W. Doyle.

West Coast
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Class I.
Sect. A.

board in the evening. They were working in sight of the ship, within a few yards of the bank of the river, in a large shed, and were not much exposed to the sun. Nevertheless, most of them contracted remittent fever soon afterwards. During this time the weather was intensely hot, the thermometer seldom under 90° Fahr. at noon, with very little rain. The place also swarmed with mosquitoes, which effectually prevented one from obtaining any rest. We left on the morning of the 22nd for Punta da Linha, arriving the same afternoon; there we continued until the 30th, when we left for Kabenda. During the time we were in the river I administered five grains of quinine to every white man daily. Up to the 26th of November no sickness had occurred. On the 27th seven men were put on the sick-list with febrile symptoms, which soon assumed the remittent form. On the 29th two men were added; on the 1st of December, ten; 2nd, two; 3rd, three; 4th, one; 5th, two; 8th, one; 11th, one; 17th, one; 25th, one; and 28th, one. These last two cases were of a mild nature, and could not be attributed to the malarious influence of the River Congo, which we left on the 1st of December. The period of incubation in the first cases, allowing them to have inhaled the malarial poison the day we left Banana Creek, would be thirteen days. Whilst we lay at Punta da Linha none of the men were allowed on shore, although the residents considered the place healthy. I met here two Englishmen, one of whom had been five, the other six, years in the river. They informed me, that with the exception of an attack of fever on arriving first, they had enjoyed good health; but that if they were guilty of any excess, either in drinking or undue exposure to the sun, they were certain to have an attack of ague, which left them unwell for some days. Whilst we lay there, a merchant ship had been lying moored to the bank of the river; she had been three weeks there, during which none of the men had taken quinine. The captain having consulted me, I advised him to issue it at once. Soon after, however, all his men were attacked with fever, and she was obliged to put in to Ascension in distress. It is a well-known fact that no ship can lie a month in any of these rivers in the hot season without a certain amount of sickness.

“ In the cases of remittent fever which were contracted in the river, the symptoms were well marked. The fever was generally preceded by languor, lassitude, and wandering pains in the back and limbs, accompanied by loss of appetite, a feeling of weakness and rigors. In some cases, however, there were no premonitory symptoms, the patient being seized with violent frontal headache, and severe pain in the lumbar region, sickness of stomach, and giddiness. The pulse was generally quick and weak, ranging from 90 to 110, tongue coated with a white fur, and red at the edges; face sometimes flushed, more generally pale; eyes congested. In four or five cases diarrhœa was a prominent symptom. The remissions always occurred during the day, commencing generally at 7 a.m. and terminating at 4 p.m., at which time the frontal headache and pain in the back and limbs increased in force; the skin became hot and dry, the patient restless and excited, and the symptoms gradually increased until midnight; thirst was constantly complained of,

of, as also inability to sleep. In several cases there was delirium; in some cases there appeared to be a slight remission about midnight, but in most of the cases the patient spent a wretched night, unable to sleep, tortured by violent headache and intense thirst, which nothing seemed to allay. There was also nausea and inclination to vomit, on attempting to drink any fluid.

“At the outset, in men of robust habit of body, there is often delirium; the patient becomes very much excited, insists on getting out of his hammock, talks wildly to himself, and labours under the idea that some one has injured him. As a rule, they are easily pacified; promise them anything they ask for, and assure them that you will guard them from all danger, and they will generally become tranquil. Nevertheless, these cases sometimes give a good deal of anxiety; they require to be constantly watched. In one case, a stoker was seized in the act of getting through a gun-port; in another, a Marine tried to get out through the gangway; both were suffering from remittent fever, and delirious. As the fever progresses, however, delirium of a low kind supervenes; the patient lies on his bed motionless, unconscious of everything around him, muttering to himself; his face pale, the skin moist and clammy, tongue covered with brown sordes, and the pulse weak and quick. On being spoken to, he answers questions in a stupid sort of manner, probably complains of dull aching pain in the head, inability to sleep, and intense thirst; immediately afterwards he relapses into the state in which he was when addressed. During this period the sensation of hunger is absent, there is an utter aversion for food; if the case is about to terminate fatally, the pulse becomes quick, weak, and intermittent, the skin cold and clammy, the teeth and lips covered with sordes; the patient is constantly muttering to himself, and picking at the bedclothes; passes his urine and fæces in bed, and either sinks from exhaustion, or is seized with convulsions and expires.

“Although I have witnessed but one case of remittent fever which terminated fatally, I have had under treatment several, in which the patients were almost pulseless, with cold and clammy skin, and low muttering delirium, which had lasted for some days, and afforded little hope of recovery, but which were brought round by the use of stimulants. From the type of remittent fever I have witnessed on this coast, I do not consider that there is any danger to life, provided that the person attacked has been in good health previously, is free from organic disease, and has been judiciously treated.”

“In no case of remittent fever that came under treatment during the year did I find it necessary to have recourse to anti-phlogistic remedies. The treatment I found most successful, and that which is usually adopted on the coast by medical men, was as follows: On a patient presenting himself with symptoms of remittent fever, I administered at once five grains of quinine, with one ounce of Epsom salts. On the bowels being freely opened, I then gave five-grain doses of quinine twice daily. If there was much frontal headache, cold lotions to the head, constantly applied, gave much relief. As most of the cases were complicated with a good deal of gastric irritability, bismuth in five-grain doses, in combination with

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two minims of dilute hydrocyanic acid, generally allayed the vomiting; if it did not, sinapisms were applied to the epigastrium. During the first week the patient seldom had any appetite, rejecting all nourishment with loathing. After that time, when the irritability of the stomach had subsided, beef tea, or chicken broth in small quantities, and at intervals, was given with success. Thirst was much complained of, as a rule. In those cases, after lime-juice had been taken for a few days, and patients stated that it did not allay their thirst, I found claret and water to answer best.

"As the fever assumed a typhoid character, there was generally great mental despondency; this it was of the utmost importance to combat by cheering the patient up, assuring him of his speedy recovery, and insisting on his taking nourishment, although he might feel a strong disinclination to do so. I have never found it necessary to give more than eight ounces of wine in the twenty-four hours. The risk of giving it is, that it is liable to bring on a return of the headache, as I found in some cases. Where want of sleep is an urgent symptom, from ten to fifteen grains of Dover's powder answer well, even although there may be a certain amount of headache. At first I was somewhat diffident of administering Dover's powder in cases where there was much frontal headache; I tried tincture of hyoscyamus, but finding it did not answer well, had recourse to Dover's powder with, in several instances, the best results. In some, cinchonism was produced after quinine had been taken for a few days, but without producing any abatement of the febrile symptoms, as it is supposed to do."

There was only one case of remittent fever in the Investigator, and two in the Jaseur. The crew of the former vessel were berthed on board the Flora at Ascension, during the whole period for which her Returns are rendered, and their health improved very much. The Jaseur was only a very short time on the station during the year, she having been transferred to the Mediterranean.

There were forty-four cases of remittent fever in the Lynx, all attributable to service in the River Niger. The medical officer* gives the following report of the outbreak:—"Forty-four cases of this form of fever were under treatment during the year, all of which occurred during, or in consequence of, the Niger Expedition. The first case occurred on the 6th of August, fifteen days after entering the river. From that time to the end of August, the disease went on increasing, then gradually decreased till the 13th of November, when the last case was admitted. Of these forty-four cases, thirty were discharged to duty, twelve to hospital, and two died. The average duration of each case on the sick-list on board ship was ten days. Two patients were three times on the list with it, and four twice. The attack usually commenced in the evening a little before the usual time of exacerbation. The patient complained of headache and general malaise. The tongue would be found foul, pulse about eighty, and the bowels confined. A draught containing

* Assistant Surgeon W. P. M. Boyle.

containing half an ounce of sulphate of magnesia and ten grains of quinine was always given at once, and usually with great benefit. About the second day great pain in the back was generally complained of, as was also great irritability of stomach, with constant vomiting. The exacerbation usually occurred about 8 p.m., and the remission at 6 a.m. The remission was in most cases accompanied by great exhaustion and tendency to syncope. The urine was scanty and high coloured, in some cases nearly of the appearance of porter. Delirium occurred in but few instances—those in which there was most debility. The febrile symptoms in most cases did not last more than a week, the subsequent debility being the most serious part of the illness.

“The treatment consisted in giving saline diaphoretics, ten-grain doses of quinine twice a day, evaporating lotions to the head, with stimulants as required. I found the chief difficulty in procuring suitable drinks for the patients. Lime-juice was nearly always rejected after the first two or three days. Barley-water, rice-water, &c., nearly always caused vomiting. Toast-and-water proved to be the most grateful and satisfying when taken in small quantities. A wineglassful every quarter of an hour was the quantity allowed, as I found that as much as could be taken with any probability of its being retained. The champagne obtained at Lagos was of such an inferior quality, that it always acted as an instant emetic. A small quantity of weak brandy-and-water was found very serviceable in some cases in which nothing else could be kept on the stomach. I think it would be very advisable to supply ships with a quantity of claret, which could be obtained at a low price, and would, I feel convinced, be of very great utility. An ice machine would be invaluable in river service, where nothing cold can be obtained. One, belonging to the officers of this ship, was unfortunately broken soon after entering the river, but I found that immersing bottles in a solution of the freezing mixture, rendered the drink much more acceptable. This irritability of stomach was one of the most difficult things to overcome. Not only did fever patients suffer from it, but men who were otherwise well would be seized with fits of vomiting in the middle of their work, and scarcely any person in the ship escaped. No violent retching generally accompanied it; the stomach appeared to be quite passive; mustard poultices applied to the epigastrium seemed to produce more good effect than anything else, and occasional five-grain doses of nitrate of bismuth proved beneficial.

“It was impossible to separate the sick from the rest of the ship’s company, as would have been desirable. Some of them were kept on deck under treble awnings, but there was not room for more than a dozen at the outside, and the rest had to remain on the lower deck.

“The lower deck was frequently sprinkled with a solution of carbolic acid, as were also the bilges, holds, and, in fact, every part of the ship. The ventilation could scarcely have been more perfect, or the ship more clean throughout.”

The exposure to which the crew of the *Lynx* was subjected was very great. On the 26th of June the vessel left Ascension and reached Lagos on the 5th of July, remaining there until the 21st.

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" While there, we took in the usual Niger stores, and flannel sufficient for two cholera belts was issued to each man. We entered the Niger on the 23rd of July, and anchored off Akana about half-a-mile from the entrance. The river here is about three quarters of a mile wide, with low banks overgrown with mangroves. Rheumatic affections are exceedingly common. We were three days among the mangroves in the Delta, and arrived at Onitsha, 165 miles from the entrance, on the 31st of July and remained three days. About this place the banks of the river begin to get pretty high and the country is well wooded. Fever is not very prevalent here, but children are very subject to crawl-crawl, or the yaws. This the natives cure by the application of a preparation of the lees of palm oil. We arrived at Lukoja, 282 miles up, on the 7th of August, having one case of fever on board.

" Lukoja is a large town on the right bank of the river, containing about 5,000 inhabitants. It is built nearly on a plain at the foot of a range of mountains. There is not the slightest attempt at drainage; nevertheless the place is very healthy, according to the report of Her Majesty's consul. There is but little fever even in the rainy season. We remained here a week, then proceeded about twenty-five miles up the River Binneh or Tchadda. During the time we were in this river (three days) the ship frequently got aground. In order to get her off, the boats had to be sent away to lay out anchors, &c., thus exposing the men a good deal. Returned to Lukoja, where we remained till the 17th of August, when we proceeded up the Niger. While at Lukoja the fever became general.

" Arrived at Egga, 358 miles up, on the 19th of August, and remained one day. The river here is very wide, and the banks low and swampy. The merchant steamers lying close to the town get a good many cases of fever. Arrived at Muraki, 400 miles up, on the 21st of August and remained till the 1st of September. The river here is about 1,000 yards wide and the banks of a moderate height; we anchored in the middle of the stream. This is the highest point the Lynx reached, but the Pioneer went some twenty miles up the River Kirduna towards Biddah. At this place a large number of cases of fever occurred. There are large swamps on each side, a little distance inland, from which no doubt the malaria proceeded.

" We left here on the 1st of September and proceeded down the river. On the 3rd the ship grounded between Egga and Lukoja, and remained on shore five days. On the third day, nine of the worst cases of fever were sent on to Lukoja in the Pioneer. They were received at the consulate, where they were under the care of the medical officer of the Pioneer.

" On getting afloat again we proceeded down the river, stopping as little as possible, and arrived at Akana on the 12th of September; remained there twenty-four hours, and proceeded to Ascension, touching at Lagos and Jellah Coffee. Arrived at Ascension on the 4th of October, and remained till the end of the year.

" While in the Niger, the weather was generally fine; thermometer about 88° in the shade. When there was any wind, it invariably

invariably blew up the river, but it was nearly always calm. For the last few days it rained continually, rendering it utterly impossible for the watch on deck to keep dry."

There were six cases of remittent fever in the *Myrmidon*. They usually commenced with loss of appetite, nausea, and sometimes an unpleasant taste in the mouth. Headache was mostly frontal, with aching in the back, and general malaise. At night there was fever, hot dry skin, bounding pulse, increased headache and thirst, with extreme restlessness. The tongue was generally dry and coated; the conjunctivæ injected.

The medical officer* says, "The period of this accession varied from an hour to three or four. The patient was then left relieved, but headache remained. In some there was yellowness of skin and conjunctivæ, especially in one case in which there was continual and excessive vomiting. The urine, in two cases, was very high-coloured and scanty. The bowels generally costive and indicating the necessity for the administration of salines. Fever generally diminished by successive accessions. Convalescence tedious, with a tendency to relapse. Tenderness on pressure over the right hypochondrium, in three cases out of six. Great sleeplessness in all cases, and, as far as I found, opium in any form contra-indicated."

There were five cases of remittent fever in the *Pandora*, attributable, apparently, to service in the River Congo; but little information, however, is given in connection with them. They appear to have been tedious, the average duration of each case being between twenty-five and twenty-six days.

In the *Peterel* there were fourteen cases of remittent fever, mostly attributable to river service; on one occasion they were contracted in the Maputa on the East Coast of Africa, and subsequently in the rivers on the West Coast. The average duration of each of these cases was between eleven and twelve days. They presented no especial features of interest.

There were forty-two cases of remittent fever in the *Pioneer*, not a large number, when it is considered that during nearly the whole year the vessel was stationed, with brief exceptions, in the lagoon at Lagos, and that she was employed in an expedition up the Niger. The medical officer† gives the following sketch of the medical topography of Lagos: "Lagos is an island surrounded on all sides by the waters coming from a large lagoon, the 'Crudu Water.' It is low, flat, thickly wooded, about two and a half miles long, and one and a half miles broad, and contains on an average about 40,000 inhabitants, nearly all of whom are natives. In reality there are two towns on the island, one, built on the west side, inhabited by Europeans, the houses, being of brick (which the natives make in the interior), are two storeys high. The lower storeys are never occupied, being principally used for store-rooms, &c. The northern, or north-eastern part of the island is inhabited by

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by natives, who live in huts, of a variety of shapes, built of mud with palm leaves. There are a few European houses in this quarter built upon piles driven into the mud, the place being very swampy. The inhabitants of these houses are generally very sickly. The remainder of the island is thickly wooded, having a few scattered villages throughout, in which fishermen live. European comforts and even luxuries can be obtained here.

" During the rainy season Lagos Bar is very dangerous to open boats crossing it, as there is a very heavy surf and the bar is constantly shifting. It is also infested with sharks, and whole boats' crews are often taken down by them when capsized, as they often are.

" The Marina, to which all the European houses face, is very low. During spring tides large tracts of this road are inundated; a thick muddy deposit is left exhaling the most offensive odours. This deposit is a very fertile source of malaria when exposed to conditions favourable to its elimination. Another source is derived from the refuse thrown along the banks by the natives. This is continually kept alive, as it were by tidal influence—a very disagreeable odour resulting from the combined emanations of the débris of floating islands and the smell of rotten fish, or of fish badly cured which the natives expose for sale during the day. This generally arises about sunset, and is most offensive to the senses of passers-by, in some causing faintness and giddiness, and in others exciting vomiting. The sanitary laws are good, but the native police take little or no trouble to enforce them.

" Below the southernmost extremity of the island is a place called "The Beach," a narrow strip of sand, jutting out for about 200 or 300 yards, separating the lagoon from the sea, on which are a number of pools called "Alligator Ponds," filled with vegetable, and often animal matter in a high state of decomposition. Scattered about this beach the débris of floating objects are in great profusion, also evolving their quota of malaria. The ship has to pass quite close to this place when crossing or recrossing the bar; and the wind generally blowing from this quarter between the hours of 10 a.m. and 4 p.m. carries malaria with it, to the full influence of which the men are exposed when the ship is coming down the lagoon.

" Another and equally fertile source of malaria lies in the low swampy ground opposite the island, filled with tropical vegetation of every description. The sea breeze blowing from the S.W. between the hours above-mentioned, wafts the emanations from both these sources up to Lagos, and meeting with their kindred there, renders the place eminently fertile as regards mephitic vapours.

" Fish is caught in the lagoon. Oysters are also to be procured from two sources, one from beds, the other from mangrove trees. The latter are not eaten, as, to a certain extent, they are poisonous.

" The seasons in Lagos are, January, February, and March, dry; April, May, June, and July, wet; August and September, dry; October and November, wet; December, generally dry. The harmattan months are December and January, when dense fogs arise in the morning and obscure the land until about 7h. a.m., when the whole

whole slowly lifts as a great curtain and exposes the surrounding objects. Little or no dew falls, and the wind is perfectly dry. The place is then moderately healthy. Until the setting-in of the rainy season, fevers of a light character prevail.

"The tornado season sets in the same time as the wet. During the first six weeks of the wet season, during a tornado, the wind howls and whistles through the rigging, the canvas awnings flap; a current of cold air rushes through the ship; a light semi-circular arch forms in the heavens, a strange contrast to the dark threatening aspect of the sky; the black clouds seem as if pregnant with thunder, and strangely lit up by vivid flashes of lightning of extraordinary hues, from the bright white forked to the sulphureous smelling purple, the rumbling of the distant thunder gradually drawing nearer until at last it bursts with a fury as if the heavens were rent asunder, at the same time that the sky is illuminated as if on fire from the continuous flashes of lightning which last for several seconds and sometimes as long as a minute. These proclaim the coming on of the cyclones of West Africa. This state of matters terminates in rain, which comes down in torrents. When this ceases the atmosphere is left beautifully clear and cool.

"During this time the person who has resided in the Tropics for any length of time, shakes and shivers, his countenance contracts, his skin shrivels, nails turn blue, teeth chatter, he is swathed in woollen and flannel, to that extent that it might be supposed he was residing in the Arctic Regions. Even people who come straight out from England about this time, feel most uncomfortable, but they usually prefer it to the sweltering wasting heat of the dry season. Fevers, dysentery, and rheumatism, prevail during this period." "I have often remarked that those serving in this ship in Lagos lagoon are unable to serve with advantage in a sea-going ship, their constitutions as it were adapting themselves to the malarial atmosphere of that locality. The sea-breeze, instead of having an invigorating effect upon them, tends to depress their vital energies; brings on a certain amount of debility, and renders them liable to fever, or what is more likely, dyspepsia and debility. This is an every day occurrence in this ship, and amongst the European merchants on shore, one journey over the bar being quite sufficient to bring on one or other of the above-mentioned diseases, in fact the ship's company were, as a rule, comparatively healthy until we made a trip over the bar. After that, some two or three men were invariably found ailing in the morning."

There were eight cases of remittent fever in the *Vindictive*, the store ship permanently stationed at Jellah Coffee. They presented no features of peculiar interest. The medical officer* says that in the treatment of this form of fever he found small doses of quinine often repeated, more efficacious than the large doses recommended by some, and less likely to produce headache. Also that if given undissolved it was better tolerated by the stomach.

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* Assistant Surgeon Wm. J Rankin, M.D.

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In the Sirius there were eighteen cases of remittent fever, all of which occurred in the Christmas quarter of the year, and were attributable to exposure at Lagos, and at St. Pauls de Loanda. The Surgeon* of the vessel says that he classed them all as remittent fever, as they were a special climatic disease quite different from the continued fevers of England. He says; "Quinine is the remedy in which I have the greatest confidence in the treatment of these coast fevers, and I have, I may say, trusted to it almost exclusively, but like every other good thing it may be abused. It was not pushed so far in any as in the first cases which were so tedious, and I have no hesitation in acknowledging my belief that they owe their protraction, in some degree at least, to the injudicious persistence in its administration." "Vomiting took place in one or two cases (especially those lately exposed to the sun), before they came under treatment, but it has not occurred in any case during treatment where it did not follow a large dose of quinine, or quinine too long persisted in, and was evidently caused by it. In the last two outbreaks of fever I have never given a larger dose than five grains, and have not repeated it oftener than three times in the twenty-four hours, and as soon as the acute fever has subsided have not given more than one five-grain dose, and the cases have been much more tractable, and the average day's sickness less."

"Almost, if not all, complained during convalescence of giddiness and fluttering in the chest on first turning out of hammock or standing up. I do not think these symptoms are improved by quinine. Others also after the subsidence of all acute symptoms have a sensation of an occasional succession of momentary chill and heats, ending in perspiration. I am growing cautious of quinine as a specific for these symptoms."

II. General Diseases.—Section B.—Constitutional Group.

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Under this head 267 cases of various forms of disease were entered on the sick-list, of which nineteen were invalided, and one proved fatal. The fatal case was one of rheumatism, occurring in the person of a Krooman.

Rheumatism.—Of this disease 209 cases were entered on the sick-list, which is in the ratio of 120·8 per 1,000 of force, being an increase, compared with the preceding year, equal to 8·8 per 1,000. The average duration of each case was between sixteen and seventeen days. The majority of these cases resulted as sequelæ of remittent fever. The medical officer of the Lynx, in which vessel there were thirty-nine cases during the year, says: "A large proportion of these cases occurred after fever, especially in middle-aged men. Indeed, nearly every man over twenty-five who had an attack of fever, subsequently suffered from rheumatism. In no instance was there any swelling of the joints, but the patients complained constant

* Surgeon Martin Magill, M.D.

constant gnawing pains, generally most severe in the knees. The hips and muscles of the thigh were also commonly affected. There was generally a nightly exacerbation, occurring at about the same time as the febrile one formerly did, but accompanied by no febrile symptoms. Tonics, with sarsaparilla and iodide of potassium, were the remedies chiefly used, most of the men being a good deal debilitated from the effects of the Niger Expedition. Change of air, diet, &c., and removal from a crowded lower deck on our arrival at Ascension, did much more for them than any medicines."

Syphilis, Primary and Secondary.—There were thirty-seven cases of primary, and seven of secondary syphilis on the sick-list during the year, which give very much in the same ratio as those of the preceding year. The surgeon of the Rattlesnake remarks, with reference to the prevalence of venereal diseases at Cape Town, and Simon's Bay that: "The Contagious Diseases Act was carried out very strictly in both places, but it could, of course, be more so in the latter place (Simon's Town), both on account of its limited extent, and isolated position, almost all the prostitutes being known to the police, and any newcomer being soon discovered. In the reports furnished to the commodore by the staff surgeon of the Naval Hospital and by the district surgeon, a great decrease is shown since the working of the Act, especially in syphilis, which cannot be concealed, but not so much in gonorrhœa, as the district surgeon informed me that every means were taken by many of the women to deceive him in preparing themselves for examination, and of course some might escape."

Of Sierra Leone, he observes: "Syphilis is very rife, I hear, among the population, especially simple chancre. Gonorrhœa is common also. The Contagious Diseases Act, however, could not be made to work either here, or any place down the coast. There are several reasons for this. First, the people generally go to native doctors, and use native medicines; then, it would be impossible to find out, or register women, as most of the negro population are loose in their habits; and again, power to carry out the Act could not be given to the native police, as they would use it as an engine to carry out their own private ends instigated by revenge or pique, or for the mere pleasure of annoyance. I hear that when the black soldiers get this disease they generally are discharged afterwards, as they become unfit for the service."

III. Diseases of the Nervous System and Organs of the Special Senses.

Eighty-six cases of various forms of disease belonging to this class were under treatment during the year, of which sixteen were invalided. No mortality was occasioned by them. The most prevalent affections were neuralgia, doubtless of malarial origin, and diseases of the eye.

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IV. Diseases of the Circulatory System.

Only eight cases appear under this head; viz., four of functional disease of the heart, three of organic disease, and one of phlebitis; and of these three were invalided, and three proved fatal.

The case of phlebitis was complicated with pneumonia. It occurred in the person of a Krooman of the Jaseur, who was placed on the sick-list on the 30th of April, at Kabenda, complaining of general pains in his limbs and muscles, with slight feverishness. The pains by degrees began to settle and grow more intense in the left axilla, where the vein felt tender, and in the shoulder, about the scapular deltoid and pectoral muscles. About the 2nd of May the shoulder began to swell considerably, and on the 3rd the superficial veins were much distended, when the pain was somewhat relieved. The report of the medical officer* goes on to state that "The arm was now swollen down to near the orbicular ligament, the hand remaining its natural size. A series of incisions were made along the back and outside of the arm, but neither blood nor serum escaped in any quantity, although fomentations were used to encourage their discharge. Fomentations, and afterwards evaporating lotions, containing iodine, were tried, with no beneficial results. The most satisfactory treatment appeared to consist in the application of iodine unguents and liniments, under a rather tight bandage, which rapidly promoted absorption when the acute symptoms were passed. Shortly after the arm began to swell he was attacked with pneumonia of the right lung, which afterwards extended to the lower lobe of the left lung. The treatment for the most part consisted of laxatives, and, when the fever was high, small doses (1-8th of a grain) of tartarised antimony. On the 24th the pneumonia was greatly improved, and respiratory murmur had returned in the lower lobes, especially of the right lung. The rusty viscid sputa have disappeared for many days, and the arm is now nearly its normal size; but he complains that it feels "heavy" on his using it; the superficial veins have diminished in size considerably, and there is no longer pain nor tenderness in the axilla. About the end of the month the left leg began to swell and be affected, in an exactly similar manner to the arm of the same side. He has all along been kept quiet in a cot, and it has been necessary to expend a considerable amount of stimulants, &c. on him, such as wine, beef tea, &c., he was so weak, with a sinking pulse and furred tongue. Indeed for a considerable period he had more than two-thirds of a bottle of wine daily, and with marked benefit. The leg improved more rapidly than the arm, the same treatment being employed in both, and about the middle of the month there was no trace of any disease of the lungs, and both leg and arm were natural in size, the superficial veins still continuing considerably enlarged, compared with their usual size. He was just able to use the arm and leg at the

* Assistant Surgeon John R. Burke, M.D.

the commencement of the following month, and was perfectly convalescent; but, as the ship was going to Sierra Leone to discharge her Kroomen, it was thought advisable to keep him on the list until her arrival there, to prevent the possibility of any relapse occurring from exposure or over-exertion before he landed."

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V. and VI. Diseases of the Absorbent System and Ductless Glands.

Thirty-eight cases appear under this head, of which thirty-seven were sympathetic bubo, and the thirty-eighth was a case of enlargement of the cervical glands. These affections were the result of debility from climatic cachexia.

Classes V.
and VI.

VII. Diseases of the Respiratory System.

Under this head 188 cases of catarrh, four of hæmoptysis, four of asthma, and twenty-nine of inflammatory disease of the lungs were entered on the sick-list; and of these, three were invalided and one proved fatal. Each case of catarrh was, on an average, between five and six days under treatment; each case of hæmoptysis a little over ten days, each case of asthma about eight days, and each case of inflammatory disease between twenty-five and twenty-six days.

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The fatal case was one of pneumonia. It occurred in the person of a Krooman of the Seringapatam, who died in the Royal Naval Hospital, Simon's Bay. Little information is given in connection with it.

VIII. Diseases of the Digestive System.

Four hundred and eighty-five cases of various forms of disease were entered on the sick-list under this head, of which five were invalided and four proved fatal. Dyspepsia and diarrhoea were the most prevalent affections; 186 cases of the former and 132 of the latter were under treatment. The average duration of each case of both forms of disease was between six and seven days.

Class VIII.

Dysentery was by no means so prevalent as during the preceding year, the difference between the ratio of the two years being equal to 18.9 per 1,000. There was a very great difference in the death-rate, however, for whereas, in 1868, of fifty-four cases entered on the sick-list only one proved fatal; during the present year, of twenty-one cases four terminated fatally. Two of these occurred in the Flora, at Ascension, where the disease is wont to be epidemic during certain seasons; one in the Lynx, and one in the Rattlesnake.

The case in the Lynx occurred in the River Niger, in the person of the assistant sick-berth attendant, who had been twice on the list before with debility, since the vessel entered the river. The medical officer says: "On the present occasion he was ordered to keep his hammock, and bitter tonics were prescribed. For some time previously he had been taking iron (he was placed on the sick-list on the 28th of August). On the morning of the 31st he said that for some time he had been suffering from diarrhoea, with bloody stools,

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Class VIII.

and for two days had passed nearly pure blood, A mustard poultice was applied to the epigastium, a full dose of opium given, and, half an hour afterwards, thirty grains of ipecacuan powder. During the day several doses of astringents were given in combination with diffusible stimulants, as the patient was much exhausted. At about six in the evening the diarrhoea seemed to be checked. Soon after this he fell asleep, and did not wake up until half-past four the next morning. The diarrhoea then returned with great severity. The motions were bloodless, but had nearly the rice-water appearance of cholera. Stimulants and astringents were given, but he never rallied, and died at half-past nine on the morning of the 1st September."

The fatal case in connection with the Rattlesnake occurred in the person of a seaman who had been sent to Ascension Hospital during the previous year, labouring under syphilitic cachexia. In order to give him the benefit of a cooler climate, he was sent up to the Mountain Hospital, where he contracted dysentery, which terminated fatally on the 6th of January.

There were no points of interest in connection with the fatal case in the Flora.

IX. and X. Diseases of the Urinary and Generative Systems.

**Classes IX.
and X.**

Under this head 143 cases of various forms of disease were entered on the sick-list, all, with the exception of ten cases, being either gonorrhoea or orchitis, chiefly of gonorrhoeal origin. The average duration of each case of gonorrhoea was a little over nineteen days, and of each case of orchitis almost precisely the same. By far the greatest number of cases of gonorrhoea occurred in the Rattlesnake. They were, in some cases, of a very virulent character, sometimes accompanied with hæmorrhage, in addition to the other symptoms, and lasting for three or four weeks. In the most severe cases, which constituted about one-third of the whole number, emetics and purgatives, and subsequently antimonials, were employed to combat the acute symptoms, after which injections of permanganate of potass occasionally seemed to do good.

XI. Diseases of the Organs of Locomotion.

Class XI.

Thirteen cases of various affections of the bones and joints occurred under this head, of which two were invalided. One of these was a case of periostitis of the tibia of a chronic character, and, as far as could be ascertained, unconnected with any syphilitic taint. There was little or nothing of an interesting character in connection with the other cases. Generally, as might be expected from the nature of the part affected, they were of a somewhat tedious character, the average duration of each case being over twenty-four days.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

West Coast
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Classes XII.
and XIII.

Boils, abscesses, and ulcers were almost the only affections entered on the sick-list under this head. The loss of service occasioned by them was very great, seventeen or eighteen men being daily incapacitated by them. Of the total number, two of abscess, six of ulcer, and one of skin disease, were invalided, and two cases of abscess terminated fatally. Psoas abscess was the cause of death in one instance; the other was a more complicated case. It occurred in the person of a seaman of the Rattlesnake, who was placed on the sick-list on the 9th of June at the Cape of Good Hope. On the previous day he had walked from Wynberg to Simon's Town, a distance of fourteen miles, and at 1 a.m. he complained of acute pain in the left knee and ankle, increased on motion of the limb. There was no swelling; the pulse was tolerably quiet. On the following day great pain was complained of on the inner side of the thigh and at the knee; the skin was hot, the tongue furred, the pulse 120, and he was very restless. In this condition he was discharged to the Naval Hospital at Simon's Town. While there his symptoms varied very much; occasionally the pain in the groin and inside of the thigh was intense, and prevented sleep; at other times there was little or no pain, only stiffness. He appears to have been allowed to move about. On the 25th of June it was noted that there was constantly a hectic flush on his cheek, and that he looked ill; the pain in the leg was a little less severe; his appetite was indifferent, and the pulse at 96. On the 2nd of July the leg was very stiff and groin painful; appetite good; functions normal. On the 3rd, "acute pain disappeared; only feels stiff about leg." 4th. Sudden pain in knee yesterday causing him to fall when walking, epistaxis. 9th. Easier; left thigh and leg very much swollen; foot œdematous, losing flesh; looks ill; pulse 120; slept fairly; appetite indifferent; bowels confined for three days. On the 20th the foot was punctured with a needle in several places, and oozing of serum took place, and continued for some time. The abdomen now began to swell, and bed sores were established. On the 23rd the dorsum of the foot was inclined to slough; on the following day diarrhœa set in. On the 25th a large axillary abscess of twenty-four hours' formation was laid open, and three pints of pus discharged. On the 27th he sank exhausted.

The following report of the post-mortem examination of the body is by the medical officer* in charge of the hospital; from his notes the above abridged history of the case has been taken. "*Body*.—Greatly emaciated; left thigh inverted, and greatly swollen, and leg œdematous, with vesications of thigh, and sloughing appearance of dorsum of left foot; lungs healthy; the right side of the heart presented thinned walls; an abnormal quantity of fatty deposit in its structure; a fibrous deposit on right and left auricles. Liver large, light

* Staff Surgeon John Bernard.

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Classes XII.
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light coloured, and of a nutmeg appearance on slicing, together with a greasy feeling of the whole organ. About the sigmoid flexure of the colon there seemed evidence of inflammatory action and suppuration, together with a glueing together of the adjacent structures, and appearance of attempted formation of a sac. The dissection caused a rupture of the thin walls, instantaneous collapse of the intestine(descending colon), great stench, and the disclosure of a large unhealthy purulent mass in which seemed embedded the psoas and iliacus muscles, left large bloodvessels and nerves. Left iliac fossa filled with dark coloured putrid pus. On cutting down the femoral sheath, the vein seemed distended with coagulated blood. No trace between the axillary abscess and these diseased structures could be discovered, and it is therefore to be presumed that the collection of pus in the axillary space was caused by absorption and subsequent deposit there."

Unclassed Diseases.

Under this head fifty-nine cases of debility, chiefly arising from climatic causes, two of delirium tremens, and three of alcoholic poisoning, were entered on the sick-list. Of these, twenty-one of the cases of debility were invalided. One case of delirium tremens occurred in the person of a private Marine, the other in a petty officer.

Wounds and Injuries.

A man sustained a fatal fracture of the skull by falling from aloft. Two men were drowned, one while in the act of diving, the other by falling overboard.

A man was suffocated by the impaction of food in the larynx, probably introduced while in the act of vomiting when drunk.

The total number of deaths was eighteen, which is in the ratio of 10·4 per 1,000 of force, being a reduction compared with the preceding year equal to 2·6 per 1,000.

Invaliding.

Under General Diseases, section A., twenty-two persons were invalided, viz., twenty-one for the sequelæ of continued and periodic fever, and one for erysipelas; and under Section B., ten persons were invalided for rheumatism; one for gout; two for secondary syphilis, and six for consumption. Sixteen persons were invalided for diseases of the nervous system, and organs of the special senses; three for diseases of the circulatory system; one for bubo; three for diseases of the respiratory system; five for diseases of the digestive system; six for diseases of the urinary and generative systems; two for diseases of the organs of locomotion; nine for diseases of the cellular tissue and cutaneous system; twenty-one for unclassified diseases; and five for wounds and injuries of various kinds. The total number of persons invalided was 112, which is in the ratio of 64·7 per 1,000 of force, being a decrease, compared with the preceding year, equal to 19·5 per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all DISEASES and INJURIES, and the Number INVALIDED and DEAD, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A. :						
Simple continued Fever - -	124	71·6	1	·5	—	—
Ague - - - - -	21	12·1	2	1·1	—	—
Remittent Fever - - - -	199	115·	18	10·4	3	1·7
Mumps - - - - -	1	·5	—	—	—	—
Erysipelas - - - - -	2	1·1	1	·5	—	—
II. General Diseases, Section B. :						
Rheumatism - - - - -	209	120·8	10	5·7	1	·5
Gout - - - - -	2	1·1	1	·5	—	—
Syphilis - { Primary - - - -	37	21·3	—	—	—	—
{ Secondary - - - -	7	4·	2	1·1	—	—
Phthisis Pulmonalis - - -	8	4·6	6	3·4	—	—
Dropsy - - - - -	4	2·3	—	—	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses :						
Apoplexy - - - - -	2	1·1	1	·5	—	—
Sunstroke - - - - -	3	1·7	—	—	—	—
Paralysis - - - - -	4	2·3	2	1·1	—	—
Vertigo - - - - -	5	2·8	—	—	—	—
Epilepsy - - - - -	6	3·4	3	1·7	—	—
Convulsions - - - - -	1	·5	—	—	—	—
Neuralgia - - - - -	18	10·4	—	—	—	—
Insanity - - - - -	5	2·8	2	1·1	—	—
Diseases of the Eye - - -	33	19·	6	3·4	—	—
Diseases of the Ear - - -	8	4·6	1	·5	—	—
Diseases of the Nose - - -	1	·5	1	·5	—	—
IV. Diseases of the Circulatory System :						
Disease of the { Functional - -	4	2·3	2	1·1	—	—
Heart - { Organic - - - -	3	1·7	1	·5	3	1·7
Phlebitis - - - - -	1	·5	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	37	21·3	1	·5	—	—
Glandular Diseases - -	1	·5	—	—	—	—
VII. Diseases of the Respiratory System:						
Catarrh - - - - -	188	108·6	—	—	—	—
Hæmoptysis - - - -	4	2·3	1	·5	—	—
Asthma - - - - -	4	2·3	1	·5	—	—
Other Diseases of the Lungs -	29	16·7	1	·5	1	·5
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	48	27·7	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - - -	4	2·3	—	—	—	—
Dyspepsia - - - - -	186	107·5	—	—	—	—
Dysentery - - - - -	21	12·1	4	2·3	4	2·3
Diarrhœa - - - - -	132	76·3	—	—	—	—
Colic and Constipation - -	58	33·5	—	—	—	—
Hæmorrhoids - - - - -	11	6·3	—	—	—	—
Hernia - - - - -	3	1·7	1	·5	—	—
Worms - - - - -	4	2·3	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	11	6·3	—	—	—	—
Diseases of the Liver, Spleen, &c. - - - - -	7	4·	—	—	—	—
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	3	1·7	1	·5	—	—
Diseases of the Bladder - -	1	·5	—	—	—	—
Gonorrhœa - - - - -	94	54·3	—	—	—	—
Diseases of the Organs of Generation - - - - -	1	·5	—	—	—	—
Stricture - - - - -	4	2·3	3	1·7	—	—
Varicocele - - - - -	2	1·1	1	·5	—	—
Orchitis - - - - -	38	21·9	1	·5	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c.	13	7·5	2	1·1	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	453	281·8	2	1·1	2	1·1
Ulcer - - - - -	120	69·3	6	3·4	—	—
Erythema - - - - -	1	·5	—	—	—	—
Diseases of the Skin - -	18	10·4	1	·5	—	—
Scabies - - - - -	1	·5	—	—	—	—
Unclassed:						
Debility - - - - -	59	34·1	21	12·1	—	—
Delirium Tremens - - -	2	1·1	—	—	—	—
Poisoning - - - - -	3	1·7	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	499	288·4	5	2·8	1	·5
Burns and Scalds - - -	25	14·4	—	—	—	—
Submersion and Drowning -	2	1	—	—	2	1·1
Asphyxia - - - - -	—	—	—	—	1	·5
TOTALS - - -	2,795	1,615·6	112	64·7	18	10·4

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Simple continued Fever - - -	857	44	901	2.4	1.3
Ague - - - - -	187	50	237	.6	.3
Remittent Fever - - -	2,387	1,581	3,968	10.8	6.2
Mumps - - - - -	13	-	13	—	—
Erysipelas - - - -	6	-	6	—	—
II. General Diseases, Section B.:					
Rheumatism - - - -	1,842	1,612	3,454	9.4	5.4
Gout - - - - -	4	8	12	—	—
Syphilis - { Primary - - -	901	461	1,362	3.7	2.1
{ Secondary - - -	253	262	515	1.4	.8
Phthisis Pulmonalis - - -	188	257	445	1.2	.6
Dropsy - - - - -	12	-	12	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Apoplexy - - - - -	6	44	50	.1	—
Sunstroke - - - - -	23	13	36	—	—
Paralysis - - - - -	40	40	80	.2	.1
Vertigo - - - - -	13	-	13	—	—
Epilepsy - - - - -	146	46	192	.5	.2
Convulsions - - - - -	9	-	9	—	—
Neuralgia - - - - -	124	-	124	.3	.1
Insanity - - - - -	14	100	114	.3	.1
Diseases of the Eye - - -	240	343	582	1.6	.9
Diseases of the Ear - - -	105	-	105	.2	.1
Diseases of the Nose - - -	-	23	23	—	—
IV. Diseases of the Circulatory System:					
Disease of the { Functional - -	85	20	105	.2	.1
Heart - { Organic - - -	46	108	154	.4	.2
Phlebitis - - - - -	80	-	80	.2	.1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - -	519	218	737	2·	1·1
Glandular Diseases - - -	44	50	94	·2	·1
VII. Diseases of the Respiratory System:					
Catarrh - - - - -	1,038	6	1,044	2·8	1·6
Hæmoptysis - - - -	42	-	42	·1	—
Asthma - - - - -	14	17	31	—	—
Other Diseases of the Lungs -	282	466	748	2·	1·1
VIII. Diseases of the Digestive System:					
Cynanche - - - - -	264	51	315	·8	·4
Diseases of the Mouth, Teeth, &c. - - - - -	10	-	10	—	—
Dyspepsia - - - - -	1,153	43	1,196	3·2	1·8
Dysentery - - - - -	269	377	646	1·7	·9
Diarrhœa - - - - -	664	201	865	2·3	1·3
Colic and Constipation - -	239	11	250	·6	·3
Hæmorrhoids - - - -	77	26	103	·2	·1
Hernia - - - - -	59	3	62	·1	—
Worms - - - - -	39	-	39	·1	—
Other Diseases of the Stomach, Intestines, &c. - - -	70	30	100	·2	·1
Diseases of Liver, Spleen, &c. -	84	59	143	·3	·1
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys - -	26	57	83	·2	·1
Diseases of the Bladder - -	6	-	6	—	—
Gonorrhœa - - - - -	1,583	232	1,815	4·9	2·8
Diseases of the Organs of Generation - - - - -	6	-	6	—	—
Stricture - - - - -	128	146	274	·7	·4
Varicocele - - - - -	10	-	10	—	—
Orchitis - - - - -	599	134	733	2·	1·1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - - -	260	54	314	·8	·4
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	3,697	481	4,178	11·4	6·5
Ulcer - - - - -	1,889	360	2,239	6·1	3·5
Erythema - - - - -	10	—	10	—	—
Diseases of the Skin - -	281	89	370	1·	·5
Scabies - - - - -	17	23	40	·1	—
Unclassed:					
Debility - - - - -	377	624	1,001	2·7	1·5
Delirium Tremens - - -	3	10	13	—	—
Poisoning - - - - -	5	—	5	—	—
Wounds and Injuries:					
Wounds, Injuries, &c. - -	4,721	888	5,609	15·3	8·8
Burns and Scalds - - -	265	78	343	·9	·5
Submersion and Drowning -	1	2	3	—	—
TOTALS - - -	26,341	9,738	36,079	98·8	57·1

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship on the WEST COAST OF AFRICA and
CAPE OF GOOD HOPE STATION.

CAUSE OF INVALIDING.	Danée.	Flora.	Fly.	Growler.	Industry.	Jaseur.	Lynx.	Myrmidon.	Pandora.	Peterel.	Pioneer.	Plover.	Rattlesnake.	Springepatam.	Speedwell.	Vindictive.	TOTAL.
I. General Diseases, Section A.:																	
Simple continued Fever	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Ague	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	2
Remittent Fever	-	-	-	-	-	-	11	1	2	-	3	-	-	-	-	1	18
Erysipelas	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
II. General Diseases, Section B.:																	
Rheumatism	1	3	-	-	1	-	-	-	-	1	1	1	-	2	-	-	10
Gout	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Syphilis, Secondary	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	2
Phthisis	-	-	-	1	-	-	-	1	-	-	-	-	2	2	-	-	6
III. Diseases of the Nervous System, and Organs of the Special Senses:																	
Apoplexy	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Paralysis	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	2
Epilepsy	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	3
Insanity	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	2
Diseases of the Eye	-	-	-	1	-	-	1	-	-	-	-	1	1	1	1	-	6
Diseases of the Ear	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Diseases of the Nose	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
IV. Diseases of the Circulatory System:																	
Disease of the Heart { Functional	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	2
Organic	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
V. & VI. Diseases of the Absorbent System and Ductless Glands:																	
Bubo (<i>Symp.</i>)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued.*

CAUSE OF INVALIDING.	Dante.	Flora.	Fly.	Growler.	Industry.	Jasur.	Lynx.	Myrmidon.	Pandora.	Peterel.	Pioneer.	Plover.	Rattlesnake.	Seringapatam.	Speedwell.	Vindictive.	TOTAL.
VII. Diseases of the Respiratory System:																	
Hæmoptysis - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Asthma - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Other Diseases of the Lungs -	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
VIII. Diseases of the Digestive System:																	
Dysentery - - - -	-	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	4
Hernia - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
IX. & X. Diseases of the Urinary and Generative Systems:																	
Diseases of the Kidneys - -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Stricture - - - -	-	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	3
Varicocele - - - -	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Orchitis - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
XI. Diseases of the Organs of Locomotion:																	
Diseases of the Bones, Joints, &c. - - - -	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:																	
Abscess - - - -	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ulcer - - - -	-	2	-	1	1	-	1	-	-	-	-	-	1	-	-	-	6
Diseases of the Skin - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Unclassed:																	
Debility - - - -	-	1	-	-	-	-	2	5	1	-	5	1	3	2	-	1	21
Wounds and Injuries:																	
Wounds, Injuries, &c. - -	-	-	-	1	-	-	-	-	1	-	-	-	2	-	1	-	5
TOTALS - - -	5	11	4	2	5	2	18	11	7	2	10	6	16	9	2	2	112

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the WEST COAST OF AFRICA
and CAPE OF GOOD HOPE STATION.

CAUSE OF DEATH.	Danle.	Flora.	Fly.	Lynx.	Rattlesnake.	Seringapatam.	TOTAL.
I. General Diseases, Section A.:							
Remittent Fever - - - -	-	-	1	2	-	-	3
II. General Diseases, Section B.:							
Rheumatism - - - - -	-	-	-	-	-	1	1
IV. Diseases of the Circulatory System:							
Disease of the Heart, Organic - -	1	1	-	-	-	-	2
Pericarditis - - - - -	-	1	-	-	-	-	1
VII. Diseases of the Respiratory System:							
Diseases of the Lungs - - - -	-	-	-	-	-	1	1
VIII. Diseases of the Digestive System:							
Dysentery - - - - -	-	2	-	1	1	-	4
XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System:							
Abscess - - - - -	-	-	-	-	2	-	2
Wounds and Injuries:							
Wounds - - - - -	-	-	-	-	1	-	1
Submersion and Drowning - - -	-	2	-	-	-	-	2
Asphyxia - - - - -	-	-	-	-	-	1	1
TOTALS - - -	1	6	1	3	4	3	18

TABLE, No. 5. - - - - -

SHOWING the Number of CASES of all DISEASES and INJURIES in the Ships

DISEASE OR INJURY.	Danic.	Dromedary.	Flora.	Fly.	Growler.	Industry.
I. General Diseases, Section A. :						
Simple continued Fever - - -	1	-	-	26	4	6
Ague - - - - -	5	-	-	2	1	1
Remittent Fever - - - - -	7	-	-	52	-	-
Mumps - - - - -	-	-	-	-	-	-
Erysipelas - - - - -	-	-	-	1	-	-
II. General Diseases, Section B. :						
Rheumatism - - - - -	9	-	40	6	3	5
Gout - - - - -	-	-	2	-	-	-
Syphilis { Primary - - - - -	1	8	-	1	2	-
{ Secondary - - - - -	-	-	-	2	3	-
Phthisis Pulmonalis - - - - -	-	-	-	-	-	1
Dropsy - - - - -	1	-	-	-	3	-
III. Diseases of the Nervous System and Organs of the Special Senses :						
Apoplexy - - - - -	-	-	-	-	-	-
Sunstroke - - - - -	-	-	1	-	-	-
Paralysis - - - - -	-	-	1	-	-	-
Vertigo - - - - -	-	-	-	-	3	-
Epilepsy - - - - -	1	-	1	-	-	-
Convulsions - - - - -	-	-	-	-	-	-
Neuralgia - - - - -	1	1	6	-	-	-
Insanity - - - - -	-	-	1	-	-	-
Diseases of the Eye - - - - -	-	-	7	2	-	3
Diseases of the Ear - - - - -	-	-	-	2	1	1
Diseases of the Nose - - - - -	-	-	1	-	-	-
IV. Diseases of the Circulatory System :						
Disease of { Functional - - - - -	-	-	2	-	-	-
the Heart, { Organic - - - - -	1	-	1	-	-	-
Phlebitis (Disease of Veins) - - -	-	-	-	-	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands :						
Bubo (<i>Symp.</i>) - - - - -	3	-	1	3	3	3
Glandular Diseases - - - - -	-	-	-	-	-	-
VII. Diseases of the Respiratory System :						
Catarrh - - - - -	6	5	19	-	2	8
Hæmoptysis - - - - -	1	-	-	1	-	-
Asthma - - - - -	-	-	-	-	-	-
Lungs - - - - -	1	-	5	2	1	-

TABLE, No. 5.

employed on the WEST COAST OF AFRICA and CAPE OF GOOD HOPE STATION.

Investigator.	Jacur.	Lee.	Lynx.	Myrmidon.	Pandora.	Petrel.	Pioneer.	Plover.	Rattlesnake.	Seringsapatana.	Sirius.	Speedwell.	Vindictive.	Total.
-	6	2	3	25	32	1	11	10	5	1	-	1	-	124
-	1	-	-	-	1	1	6	-	3	-	-	-	-	21
1	2	-	44	6	5	14	42	-	-	-	18	-	8	199
-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
-	8	3	39	6	4	14	5	12	37	7	1	2	8	209
-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
-	1	-	1	3	-	2	-	3	12	2	1	-	-	37
-	-	-	-	-	1	-	-	1	-	-	-	-	-	7
-	-	-	-	2	-	3	-	1	1	-	-	-	-	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
-	-	-	1	-	-	-	-	-	1	-	-	-	-	2
-	-	-	-	-	-	1	-	-	1	-	-	-	-	3
-	-	-	-	-	-	1	-	-	2	-	-	-	-	4
1	-	-	-	-	-	1	-	-	-	-	-	-	-	5
-	-	-	1	-	2	-	-	-	-	-	1	-	-	6
-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
-	-	-	3	-	-	-	1	-	5	-	1	-	-	18
-	2	-	4	1	2	-	-	1	1	-	-	-	-	5
-	3	-	-	3	3	3	2	-	2	1	2	1	-	33
-	-	-	-	-	-	-	-	-	1	-	-	-	-	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	1	-	-	-	-	-	-	-	1	-	-	-	-	4
-	1	-	-	-	-	-	-	-	-	-	-	-	-	3
-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
-	1	1	1	7	1	4	-	6	3	-	-	-	-	37
-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
-	13	3	21	11	10	31	2	5	28	4	7	2	11	188
-	-	-	1	-	-	-	-	-	1	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	4	-	-	-	4
-	-	-	1	-	5	2	1	1	6	1	1	-	2	29

TABLE, No. 5.—Showing the Number of Cases of all Diseases and Injuries in the Ships

DISEASE OR INJURY.	Danish.	Dromedary.	Flora.	Fly.	Growler.	Industry.
VIII. Diseases of the Digestive System :						
Cynanche - - - - -	5	-	2	-	1	3
Diseases of Mouth, Teeth, &c. - - -	2	-	-	-	-	-
Dyspepsia - - - - -	22	6	20	4	5	6
Dysentery - - - - -	-	1	11	-	-	-
Diarrhœa - - - - -	16	1	17	17	19	1
Colic and Constipation - - - - -	5	-	3	5	2	5
Hæmorrhoids - - - - -	1	-	-	-	-	-
Hernia - - - - -	-	-	2	-	-	-
Worms - - - - -	-	-	1	-	1	-
Other Diseases of Stomach, Intestines, &c. -	4	-	1	1	-	-
Diseases of Liver, Spleen, &c. - - -	2	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems :						
Diseases of the Kidneys - - - - -	-	-	1	-	-	-
Diseases of the Bladder - - - - -	-	-	-	-	-	-
Gonorrhœa - - - - -	8	7	-	2	1	1
Disease of the Organs of Generation - -	1	-	-	-	-	-
Stricture - - - - -	-	-	-	2	1	-
Varicocele - - - - -	-	-	-	-	-	-
Orchitis - - - - -	4	-	1	2	-	-
XI. Diseases of the Organs of Locomotion :						
Diseases of the Bones, Joints, &c. - -	-	1	-	2	2	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :						
Phlegmon and Abscess - - - - -	61	3	31	32	27	25
Ulcer - - - - -	9	2	2	8	3	7
Erythema - - - - -	-	-	-	-	-	-
Diseases of the Skin - - - - -	-	-	1	-	1	-
Scabies - - - - -	-	-	-	-	-	-
Unclassed :						
Debility - - - - -	-	-	2	-	-	2
Delirium Tremens - - - - -	1	-	-	-	-	-
Poisoning by Alcohol - - - - -	-	-	-	-	-	-
Wounds and Injuries :						
Wounds, &c. - - - - -	37	8	40	23	17	23
Burns and Scalds - - - - -	1	-	3	3	2	1
Submersion and Drowning - - - - -	-	-	1	-	-	-
TOTALS - - -	217	43	227	201	108	102

employed on the West Coast of Africa and Cape of Good Hope Station—*continued.*

Investigator.	Jacur.	Loc.	Lynx.	Myrmidon.	Pandora.	Peterel.	Pioneer.	Plover.	Rattlesnake.	Springapetam.	Sirius.	Speedwell.	Vindictive.	TOTAL.
-	-	1	2	-	4	3	-	1	26	-	-	-	-	48
-	-	2	-	-	-	-	-	-	-	-	-	-	-	4
2	2	6	13	9	4	7	18	18	17	4	6	1	16	186
-	-	-	5	7	1	-	2	1	-	-	-	-	-	21
1	4	4	7	7	9	9	4	4	6	2	3	1	-	132
-	3	2	3	3	2	3	10	1	6	1	3	1	-	58
-	-	1	2	-	-	1	-	1	1	3	1	-	-	11
-	-	-	-	-	-	-	1	-	-	-	-	-	-	3
-	1	-	-	-	-	1	-	-	-	-	-	-	-	4
-	-	-	-	1	1	-	1	-	1	1	-	-	-	11
-	1	-	2	-	-	-	-	-	2	-	-	-	-	7
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	1	-	-	-	-	-	-	-	1	-	-	3
-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
-	-	1	1	5	7	8	-	2	38	4	1	-	8	94
-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	1	-	-	-	-	-	-	-	-	-	-	4
-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
-	3	-	2	1	3	1	2	4	10	2	-	-	3	38
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	1	-	-	-	1	4	1	1	-	-	-	-	-	13
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	12	11	22	30	32	34	3	14	76	6	15	7	11	453
-	2	1	5	5	3	3	6	4	51	2	3	1	3	120
-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
1	3	2	2	1	1	3	-	-	3	-	-	-	-	18
-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	29	8	1	-	7	2	3	-	5	-	-	59
-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
-	-	-	-	1	-	2	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	21	10	12	32	30	45	6	16	126	10	19	2	19	499
-	-	1	-	2	3	-	-	1	5	1	2	-	-	25
-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
10	94	51	232	166	158	204	131	111	486	56	91	19	89	2,795

TABLE, No. 6. - - - - -

SHOWING the Names of the SHIPS; the Average Complements, &c.; the Number of Men Sick Daily in each Ship;

P. O. Paid off.		C. Commissioned.				
Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.
Sixth Rate - -	Danae - - - S. C.	Portsmouth	28 Nov. 1867	6	1,287	S. 350
	Rattle-snake - - -	Devonport -	9 Sept. 1867	17	1,705	S. 400
	Sirius - - - -	Portsmouth	23 July 1869	6	1,268	S. 350
Sloop - - -	Peterel - - - -	Devonport -	2 June 1866	3	669	S. 150
Gun Vessel - -	Fly - - - -	Devonport -	14 Dec. 1868	4	464	SS. 120
	Growler - - - C.	Devonport -	29 June 1869	4	464	SS. 120
	Jaseur - - - S. C.	Sheerness -	26 Aug. 1867	5	427	S. 80
	Lee - - - - S. C.	Sheerness -	10 June 1867	5	431	S. 80
	Lynx - - - -	Devonport -	14 Dec. 1868	4	464	SS. 120
	Myrmidon - - - -	Chatham -	29 Oct. 1867	4	697	S. 200
	Pandora - - - -	Portsmouth	17 March 1868	5	426	S. 80
	Plover - - - -	Woolwich -	25 Sept. 1867	3	663	S. 160
	Speedwell - - - S. C.	Woolwich -	24 July 1867	5	428	S. 80
Steam Vessel -	Pioneer - - - -	River Congo	7 June 1865	-	142	P. 34
	Investigator - - P. O.	Lagos -	15 Aug. 1866	2	149	P. 34
Receiving Ship -	Seringapatam - - D.	C. G. Hope	1 April 1867	-	1,152	-
Store Ship - -	Dromedary - - - P. O.	Ascension -	1 July 1867	2	654	S. 100
	Flora - - - -	Ascension -	1 Jan. 1869	10	1,634	-
	Industry - - - S. C.	Woolwich -	25 April 1866	2	638	S. 80
	Vindictive - - - -	Jellah Coffee	1 April 1867	2	1,758	-

- - - - - TABLE, No. 6.

Cases; the Total Number of Days' Sickness on Board; the Average Number of and the Number Discharged to Hospital.

S. C. Station changed.

D. Returns Defective.

Period.	Average Com- plements.	Average Com- plements corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
1 Jan. to 30 Sept.	205	150	217	2,119	5·8	38·6	5
Year - - -	320	320	485	4,963	13·5	41·1	26
1 Oct. to 31 Dec.	325	60	91	818	2·2	36·6	—
Year - - -	115	115	204	1,700	4·6	40·	11
Year - - -	85	85	201	2,250	6·1	71·7	8
1 July to 31 Dec.	80	40	108	1,067	2·9	72·5	14
1 Jan. to 30 Sept.	70	50	94	865	2·3	46·	5
1 Jan. to 31 March	75	20	51	406	1·1	55·	4
Year - - -	70	70	232	1,602	4·3	61·4	57
Year - - -	100	100	166	1,651	4·5	45·	13
Year - - -	75	75	158	1,690	4·6	61·3	12
Year - - -	90	90	111	1,473	4·	44·4	11
1 Jan. to 31 March	80	20	19	250	·6	30·	—
Year - - -	40	40	131	974	2·6	65·	4
1 Jan. to 22 Feb.	49	5	10	85	·2	40·	1
Year - - -	120	60	56	361	·9	15·	9
1 Jan. to 24 April	75	25	43	613	1·6	64·	9
Year - - -	280	280	227	1,517	4·1	14·6	40
1 April to 31 Dec.	85	60	102	915	2·5	41·6	7
Year - - -	65	65	89	1,051	2·8	43·	—

EAST INDIA STATION.

East India
Station.

THE squadron on this station in 1869 comprised twelve vessels, viz., two, of the fourth-rate; one, of the sixth-rate; four sloops; two gun-vessels; and three troop-ships. The returns from eight of these vessels were for the whole year, and for the remainder for periods varying from three to nine months. The mean force corrected for time was 2,300, and the total number of cases of disease and injury entered on the sick-list 4,277, which is in the ratio of 1859·5 per 1,000, being a decrease compared with the preceding year equal to 218·8 per 1,000. Of these 129 were invalided, and thirty-one died, the former being in the ratio of 56, and the latter of 13·4 per 1,000. Compared with the preceding year, there was a decrease in the invaliding rate to the extent of 21·7, but an increase in the ratio of mortality equal to 1·6 per 1,000. During the preceding year, the ratios of cases entered on the sick-list, and of invaliding, were exceptionally high, owing to the exposure of the crews of the vessels employed in the Red Sea, in connection with the Abyssinian Expedition.

The average number of men daily sick from Class I., General Diseases, Section A., was in the ratio of 4·5 per 1,000; and from Section B., 8·6. From diseases of the nervous system, and organs of the special senses, the average daily ratio was ·8 per 1,000; from diseases of the circulatory system, ·6; of the absorbent system and ductless glands, 1·4; of the respiratory system, 2·2; of the digestive system, 6·3; of the urinary and generative systems, 2·2; of the cellular tissue and cutaneous system, 11·3; from unclassified diseases, 1·1; and from wounds and injuries of various kinds, 8·9. The total average number of men sick daily was 119·7, which is in the ratio of 52 per 1,000, being a reduction compared with the preceding year equal to 13·9 per 1,000.

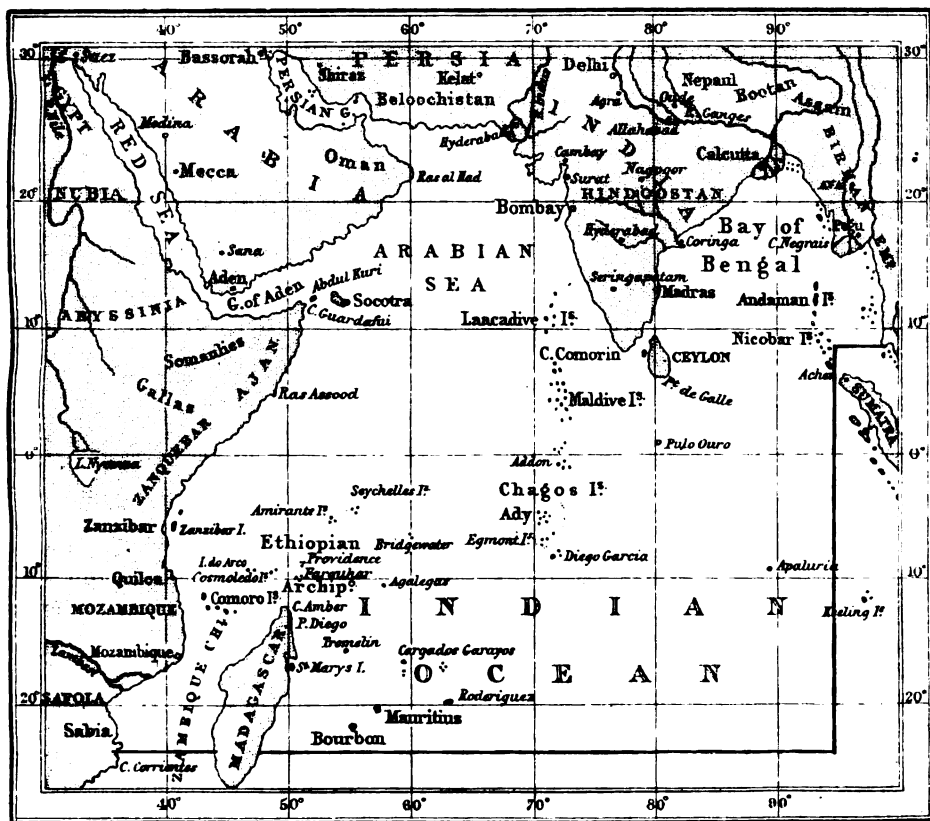
I. General Diseases.—Section A., or Febrile Group.

Class I.
Sect A.

Under this head, 517 cases of various forms of disease were entered on the sick-list, viz., thirteen of small-pox, two of vaccinia, seven of measles, eight of enteric fever, 293 of simple continued fever, seventy-two of ague, ninety-nine of remittent fever, two of cholera, fourteen of influenza, one of mumps, and six of erysipelas; and of these, two of enteric fever, one of ague, and eleven of remittent fever were invalided; and two of cholera proved fatal.

Small-

EAST INDIA STATION.



East India
Station.Class I.
Sect. A.

Small-pox.—Of the thirteen cases of small-pox which were entered on the sick-list in the squadron during the year, six occurred in the Forte, three in the Jumna, two in the Octavia, and two in the Star.

In the Forte, the first case occurred in the person of a seaman, who presented himself on the 2nd of April, the day after leaving Bombay, with a well-marked varioloid eruption. The surgeon* of the vessel says: "He had slept on shore in a low public-house about a fortnight previously. He had very good vaccination marks on both arms. He was placed under a screen in the fore part of the main deck, and a sentry had orders that he should be kept perfectly isolated. The case proved to be an extremely mild one, the rash not passing beyond the vesicular stage. He was discharged to duty. The screen, bedding, clothes, &c., were all carefully washed, and steeped in a solution of carbolic acid. No other case occurred till the 3rd of May, a fortnight after leaving Muscat, where many of the men landed, and where there was much communication between the native Arabs and the ship. The man had frequently been on shore at Muscat, and had gone to the crowded bazaar for the purpose of buying provisions. In this part of Arabia, small-pox is always prevalent.

"Soon after a mess-servant had an attack of the disease. He had not been on shore at Muscat, but had a good deal of intercourse with natives who came on board selling fowls, eggs, vegetables, &c. On the 6th of May a boy and a leading seaman showed well-marked symptoms of the disease. They had landed at Muscat. Two days afterwards an ordinary seaman was attacked. He had been on the list suffering from chronic diarrhoea for a considerable time previously. All six had remarkably good vaccination cicatrices, and in all the disease was of a very mild character. Indeed, in three, the eruption was so modified, that they might be entered under the heading of varicella.

"The men affected with the disease were kept perfectly isolated. The commodore ordered a large portion of the poop to be screened off for their reception. Marines who had had small-pox were placed as sentries, and prevented any intercourse between the sick men and the rest of the ship's company. To these precautions may be attributed the immunity from the further spread of the disease.

"Before we left Bombay, vaccine lymph was procured, and attempts were made to re-vaccinate the younger men and the boys. They were, however, unsuccessful. Nearly all had good vaccination marks."

There were three cases of small-pox in the Jumna, all occurring at Bombay, in the persons of native stokers. There was no difficulty in tracing the origin of the disease in these cases as the men had daily leave on shore, where small-pox was prevalent.

In the Octavia, there were two cases of small-pox, with reference to

* Surgeon J. W. S. Meiklejohn, M.D.

East India
Station.

Class I.
Sect. A.

to which the surgeon* of the vessel makes the following observations :—" The occurrence of two cases of small-pox on board during the first week of March caused considerable alarm, but their prompt removal to hospital sufficed to prevent any spread of the contagion on board. It was thought advisable, however, at the same time, to have all persons on board having unsatisfactory marks of vaccination, or unprotected by previous attacks of the disease, re-vaccinated, and within forty-eight hours of the first case of variola showing itself, thirty-eight persons were vaccinated from a native child sent off by the superintendent of vaccination in Bombay, and of those, twenty-nine 'took' well, one so well, indeed, that he had to be placed on the sick-list for five days; his arm becoming very much inflamed, and a roseolar eruption appearing all over his body, with slight feverishness.

"The occurrence of this threatening of small-pox on board, within a few days of the corresponding time of the year at which the epidemic broke out on board at the same place in 1866, is perhaps worthy of note, as corroborative of the fact, which is, I believe, proved by statistics, that small-pox is more apt to attack Europeans at Bombay in early spring than at any other season of the year. I regret to have to add, that it was found necessary to leave both the cases attacked in hospital, as one was still seriously ill, and the other had not got beyond all risk of conveying infection, when the ship had to leave Bombay. Both cases would, however, I trust, ultimately do well, as they were both modified by vaccination, although one was a confluent case. Neither of them was in the ship during the epidemic of 1866; but both joined at comparatively recent dates. All those cases of vaccination that were successful, were also new entries in the ship."

There were two cases of small-pox in the *Star*. One occurred in the person of a seaman, who doubtless contracted the disease on board, there being some cases among a number of captured slaves. Fortunately this was the only case that occurred amongst the ship's company, and it was of a modified character. The surgeon† observes: "I had little fear for the ship's company, as all were vaccinated, and had passed unharmed, with one exception, through a severe epidemic of the disease which occurred amongst a number of slaves on board in the previous year."

In the other case which occurred in this vessel, the disease presented itself in the person of a native Tamil of Ceylon, who had contracted it at Bombay.

Measles.—Of the seven cases of this form of eruptive fever entered on the sick-list, two occurred in the *Euphrates*, and five in the *Jumna*. They were of little importance, and the infection was evidently brought on board the vessels by the children of the soldiers embarked in these troop ships.

Enteric

* Surgeon Doyle M. Shaw.

† Surgeon W. R. Bennett, M.D.

Enteric Fever.—Eight cases of this dangerous form of fever appear in the returns from the squadron, of which seven occurred in the Jumna, and one in the Nympe. With respect to the former vessel but little information is given with reference to the disease, and no suggestion offered as to its probable origin; and no information whatever is given in connection with the case in the Nympe. From the nosological tables, it may be gathered that each case of this disease was on an average about three weeks under treatment.

East India
Station.

Class I.
Sect. A.

Simple Continued Fever.—Two hundred and ninety-three cases of simple continued fever were under treatment during the year, all of which were discharged to duty. The average duration of each case on the sick-list was precisely six days. Of the total number of cases, 134 occurred in the Jumna, the majority of them were of a trivial character, but a few severe cases occurred chiefly amongst the native stokers. The disease was considered to be caused by sudden changes of climate to which the men were exposed on the passage between Suez and Bombay.

In the Euphrates, in which there were fifty-five cases of simple continued fever, the surgeon* remarks on the difficulty he encountered in classifying the various forms of fever that came under observation. He says, "Careful attempts were made to classify those cases of fever, as they were divided into fifty-five of simple continued fever, twenty of intermittent fever, and twenty of remittent fever; but in many instances it was difficult to decide to which class some of the cases should be assigned. A strong presumption was entertained that they were all intimately connected with each other in their etiology. Frequently it happened that after some slight sun exposure, a person would suffer headache, congestion of the eyes and face, and general disturbance of the system for two or three days, and then all would pass off, and he would be quite well. Apparently from the same cause, fever of an irregular intermittent character, of longer duration, and periodic in its exacerbations would ensue; and again a fever would commence, in no way distinguishable at the outset from the other two, yet at the end of six or eight days, so far from there being any amendment, there would be an aggravation of the symptoms generally, and they would prove intractable and unamenable to treatment, and it would be clearly evident that the symptoms were those of remitted fever of a severe type; in some few instances there were severe well-marked typhoid symptoms. It is noticeable in the returns for the year, how nearly the same number of cases of simple continued fever occurred in each quarter; whereas of either ague or remittent fever, there were none in the first quarter, thirty in the second and third quarters, and ten in the fourth quarter, proving how directly those diseases were caused by the climate of Bombay, and that it was sufficiently powerful to produce ten cases in the quarter after the ship had left that place and resumed her trooping."

Remittent

* Surgeon S. A. Willis, M.D.

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Remittent Fever.—There were ninety-nine cases of this form of fever on the sick-list during the year, of which eleven were inva-
lided. The average duration of each case was about thirteen days. In the Cossack, the vessel in which the largest number of cases occurred (fifty-two), the disease is said to have been characterised by greater or less severity of symptoms, according to the extent of solar or malarial exposure. The medical officer* observes, "These symptoms, as they became more or less developed, constituted either febricula or remittent fever, according to their intensity. By far the greater number of cases that appear in these returns, originated through exposure to the sun. The attack generally commenced the same day that the man had been either walking or working in the sun, and was ushered in with severe headache; a feeling of chilliness; a hot dry skin; thirst; with or without vomiting; bowels usually confined; urine scanty and high coloured; and the tongue thickly coated with a brownish fur. These symptoms lasted till 4h. or 5h. a. m., when there was an abatement of the fever, and the skin became moist. About 3h. p. m. an exacerbation occurred, which was in due course followed by the remission, about the same time as the former. These phenomena lasted from three to ten or fourteen days. The treatment, as a rule, consisted in giving from six to ten grains of calomel, applying a sinapism over the epigastrium, and allowing the patients as many effervescing draughts as they chose to drink. After there had been free action of the bowels, a mixture of chlorate of potass and dilute hydrochloric acid was given every four hours; and lastly, when the tongue commenced to clean, the mixture was changed for quinine, in five or ten grain doses, three times daily; at the same time one or two glasses of wine, and some good soup were found beneficial in hastening convalescence.

"While the ship was at Zanzibar, and some time after leaving that locality, fever of a more decidedly remittent type prevailed, accompanied in a few instances with typhoid symptoms, and troublesome diarrhœa, and hepatic complication. These occurrences were probably owing to the emanations arising from mephitic deposits on the beach facing Zanzibar. The fever generally left the patient in an excessively weakly condition, convalescence was tedious, and even when he was discharged to duty he became a martyr to dyspepsia and constipation.

"In two instances only have I had an opportunity of tracing this fever to direct malarious agency. A sub-lieutenant and a midshipman slept on shore at Pomoney (Johanna), and bathed on the following morning before the sun was up, in a pond supplied by a stream which came from the jungle. Nine days afterwards the sub-lieutenant was seized with vomiting and other symptoms of remittent fever; and on the tenth day the midshipman was also attacked. The sub-lieutenant was eighteen days, and the midshipman fifteen days on the list."

Cholera

* Surgeon Frederic Piercy.

Cholera.—Two cases of this malignant disease occurred in the squadron, both of which proved fatal. One occurred in the *Dryad*, the other in the *Malabar*.

The following report in connection with the case occurring in the *Dryad* is by the medical officer* of that vessel. "A fatal case of cholera occurred this year. There were two cases under treatment, but only one belonged to the ship's company. The other does not appear in the returns. The following are the particulars of the fatal case.

" æt. 46. Sick-berth attendant. An old Marine. Married, Suffered from a severe attack of dysentery in the early part of 1869. Looked prematurely old and worn; zealous; of an anxious disposition; temperate; led a steady regular life; served his time for a pension.

"At 4h. p.m. on the 5th of December, on the passage from Zanzibar to Bombay, I was sent for to see this patient. On my arrival I found him lying on deck, under the fore-castle, in a state of extreme prostration. The extremities were icy cold; the whole of the body bathed in a cold clammy perspiration. Pulse not perceptible at the wrist, and the heart's action hurried, feeble, and indistinct. He had severe cramps in all his limbs and fingers, and his voice was feeble and scarcely audible. He complained of headache and pains all over. He was suffering from vomiting and purging, and in fact from all the symptoms of Asiatic cholera. He did not complain much of thirst, nor of any feeling of coldness. The trunk, although much reduced in temperature, was far from presenting to the touch the same morbid degree of coldness as the extremities.

"On inquiry I discovered that the attack had suddenly set in two and a-half hours previously, but owing to gross ignorance or extreme neglect on the part of the persons about him, no notice had been taken of his condition till four o'clock, my hour for visiting the sick. The attack was not preceded either by premonitory diarrhoea or any other symptom of ill health.

"He was at once put into a cot, under a screen, on the starboard side of the fore-castle, and frictions with oil assiduously applied to the limbs, by two petty officers told off for the purpose. Turpentine stupes were applied to the stomach, and warmth to the feet, giving him at the same time stimulant draughts containing tincture of ginger and aromatic spirits of ammonia, while barley water was being prepared for drink, to which was added ten grains of chlorate of potass to the ounce.

"In this way a little heat was restored; the cramps in the legs became less severe, and by eight o'clock were entirely confined to the arms and fingers, but the pulse did not rally. He had only vomited once or twice since I saw him, and the watery discharges from the bowels were neither urgent nor painful, the evacuations escaping without any effort.

"Warm flannel bandages applied along the whole length of the legs

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* Surgeon D. O'Connor, M.D.

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legs seemed to have a most beneficial effect in arresting the cramps; but this advantage was at once followed by increase of pain in the stomach, and cramps along the muscles of the abdomen. The pain resisted chlorodyne in effervescing draughts, with warm fomentations to the abdomen, but the cramps ceased. The breathing had now become more anxious and hurried, and he complained of heat and oppression, although a cool breeze from an adjoining port circulated freely round him. In this condition, with some slight variation, depending on the strength or feebleness of the voice, he lingered till 7h. 40'. a.m. of the 6th, when he suddenly expired, apparently from sheer exhaustion. There was scarcely any lividity of the body. The eyes were particularly bright, and full of expression, and his intellect clear to the last moment.

"This attack was very sudden, and ran a very rapid course. The collapse seems to have come on very early, and continued with formidable obstinacy. It must have been comparatively independent of the discharges by the stomach and bowels, which seemed to me by far the least alarming feature of the disease, either in quantity or frequency.

"In this case no regular plan of treatment was pursued. The early and extreme collapse admitted of no delay, and the rapid tendency to death by asthenia had to be combatted in dealing with symptoms that led more prominently in that direction. This consisted in endeavouring to restore the heat of the body, and to improve the condition of the pulse by means of stimulants and essence of beef internally, and warm embrocations locally, all of which ultimately proved unavailing against a most virulent disease suddenly seizing upon a constitution already very much worn and enfeebled.

"The disease was in all likelihood contracted from a young Negro boy, who had come on board the ship at Zanzibar on the 29th of November, the evening preceding our departure from Bombay. This boy fell sick with cholera on the 2nd of December, when we had been three days at sea. His was also a very severe attack. Collapse set in early, with intense coldness of the extremities and total absence of pulse at the wrist. Great restlessness and pains all over, and especially in the region of the heart, to which he constantly referred severe pain. In this case there were no cramps, but the purging and vomiting were incessant. His condition had been for some days very critical, but he ultimately recovered. It was during his attendance on this boy that the deceased was attacked.

"For a few days preceding our departure from Zanzibar there was a rumour that cholera had made its appearance on shore, and was committing dreadful havoc amongst the native population, causing as many as from thirty to forty deaths daily. The rumour was well known to the medical men on shore, but up to the time of my inquiry no case had come under their actual notice.

"It was well known for a long time that cholera was raging with fatal effect at Pangany, a town of some importance on the opposite coast of the mainland of Africa. There appears to be some trade carried on between that town and Zanzibar, and constant communication takes place between them. This being the case it does not
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speaking badly for the contagious nature of cholera that the disease had not extended to this place up to a few days before our departure, more especially when we remember the dirty habits of Africans and Arabs, and their utter disregard of all hygienic and sanitary laws.

"No leave was granted to the ship's company, either special or privileged, during our stay at Zanzibar, and deceased never landed there. It must be noticed, however, that a constant communication had been kept up with the shore by officers, stewards, cooks, servants, and in various other ways, since up to the time of the rumoured outbreak of cholera, the town was said to be remarkably healthy, except, perhaps, some few cases of remittent fever which is endemic here. No one can well imagine any place more favourable to the spread of disease, on the occasion of an epidemic, than is the town of Zanzibar. There it would find a congenial soil in the bosom of filth and in the perfect freedom from the wholesome restriction of any sanitary law. For the better understanding of its condition, I will endeavour to give a brief outline of the place, although a moment's glance at any chart of it will afford better information than can be conveyed by verbal description.

"Zanzibar is situated on a narrow tongue of land running N.E. and S.W., and at flood tides nearly surrounded by water. At low water extensive marshes are left exposed in the rear of the town and a filthy beach of considerable extent discloses itself on its seaward side. These places are the general receptacles of human excrement and all the filth and abomination of a thickly populated and densely crowded town, so that on all sides it is surrounded by sources calculated to generate and foster disease.

"During our stay, however, the direction of the winds tended to remove or neutralize these malarial emanations from the swamps in the rear, while they favoured the smells and emanations from the beach, being blown right into the town; the dwellings of the foreign residents on the beach having to bear the brunt of this offensive and intolerable nuisance, especially in the neighbourhood of the English Mission, where even a momentary respite cannot be obtained from this everlasting nuisance. This arises from a large portion of the beach in this locality being beyond the reach of tidal wash.

"During our stay at Zanzibar the ship's company enjoyed excellent health. There is at Zanzibar an hospital established by the superiors of the Catholic Mission in that town, and attended by a French naval surgeon. It is rather small, but clean and in good order. Patients of every nationality are received there, so far as the accommodation will admit, and meet with every care and attention.

"But to return from this digression to the question of cholera. It may be very naturally asked, how has it happened that this very fatal and undoubtedly contagious disease has limited itself to only two cases on board this ship? Can it be the prompt measures adopted at the first outbreak of the disease; immediately separating the patient from the ship's company, and the unsparing use of disinfectants during the illness of the patient, and after his death; taking care that none but the special attendants should approach the screen, till the

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the body as well as the bedding and foul clothes of the deceased were consigned to the deep, a few hours after death?

"In these precautions I admit I have great confidence; but it must not be forgotten that segregation on board ship is a matter of much difficulty under the most favourable circumstances, and in small vessels of war of the Dryad class, a thing next to impossible, supposing always the disease to possess strong contagious properties like small-pox, measles, or typhus fever. The weather during the whole of the passage was most favourable to health; a cool breeze circulated freely through the ship, while the sea was sufficiently calm to admit of the ports being kept constantly open. The humidity of the atmosphere was, however, as calculated to favour the extension of disease as the opposite condition is known to retard if not altogether prevent its spread.

"In the present instance, although the precautions adopted were attended with the most satisfactory results, yet it is difficult, to believe that these measures could of themselves have so suddenly arrested so rapid and so formidable a disease, and that it may not have ceased of its own accord. One cannot help noticing that however fatal its seizures may be when it appears on board ship, how comparatively few they are, notwithstanding the crowding and the other disadvantages. Two or three cases in a very short space of time occur; they have a rapid and fatal termination, and the disease suddenly disappears, perhaps never to return again, having as it were exhausted its virulence in its first violent outbreak. This may not invariably be so, but it appears to be usually the case as noticed in the records of its outbreak on board ships on this station of late years. The contagious nature of the poison, or whatever it may be, would appear to require constant transfer from one person to another, failing which it would seem to become inert.

"In the cases on board this ship, the period of incubation would seem to be very short. The probability in the one case, and the almost certainty in the other, would seem to point to a period of four days, if not less. The Negro boy fell ill on the 2nd of December, the fourth day after his arrival on board. Supposing that in this case the poison had been imbibed on the 29th of November, this would make the period of incubation exactly four days. The presumption, however, seems to be in favour of a later date. A boy belonging to the English Mission, and no doubt not at liberty to stray about at large would be less likely to get exposed to infection; but even taking the mean of the time, it would still be four days. The sick-berth attendant did not come in contact with this boy until the 2nd of December, when he commenced his attendance upon him, and fell sick himself on the 5th of December, or the fourth day of his attendance. There is little doubt that he contracted the disease from the Negro boy, although the proof cannot be reduced to absolute certainty; but occurring in the person of one who had been in constant attendance on a cholera patient and on him only, looks at least more than a mere coincidence, and indeed almost to a certainty favours this view, and is in keeping with the usual habits of cholera.

"Assuming, therefore, that in these cases of the Dryad we had the usual

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usual manifestations of cholera, and taking other instances of the disease into consideration, it may fairly be stated that the period of incubation is not long, although it would be an interesting question to prove what that may be, or whether it has any precise or regular period at all, as it is a question that bears, to some extent, on quarantine and infection."

At a subsequent period the same officer forwarded the following interesting report on the epidemic of cholera which made its appearance at Zanzibar in 1869:—

"On the occasion of a recent visit (July 1870) to Zanzibar, I took the opportunity of making some inquiries relative to the history and progress of the late epidemic of cholera, which had been committing great havoc in that island between the latter end of November 1869 and June 1870.

"As I am not aware that any report of it has been sent to the Medical Director General, I beg to forward a *resumé* of the result of these inquiries for his information.

"I may mention at the outset that in December 1869, shortly after leaving Zanzibar for Bombay, two cases of cholera occurred on board this ship, one of which proved fatal; a report of this was immediately forwarded on reaching Bombay.

"Until my late visit to Zanzibar, I was entirely ignorant of the course and progress of the epidemic, in consequence of the imperfect means of postal communication with that island, both from Bombay and other parts of the station; cruising for the suppression of slavery being entirely suspended this season, probably from apprehension of risk to the squadron from infected dhows, prevented still further occasional opportunities of communicating by means of ships of war.

"On the 9th June 1870, we left Trincomalee for Zanzibar. Having occasion to communicate with the senior officer, we touched at Seychelles, where we arrived on the 3rd of July: finding that he was away on a cruise, and his return being daily expected, we awaited his arrival before venturing to proceed directly to Zanzibar.

"Seychelles is at all times a very enjoyable place, but at this season of the year especially, the climate is excellent, and the weather cool and bracing. During our stay (eleven days) we found it an agreeable refreshing change, especially after a singularly rough passage, of twenty-five days of damp, squally, disagreeable weather.

"The authorities at Seychelles were rigorously enforcing the quarantine laws on all vessels arriving from the Mozambique and other suspected ports, and a Portuguese vessel of war, which had recently arrived from the Mozambique with passengers and mails for the French homeward-bound packet, having had a fatal case of cholera on the passage, was at once placed in quarantine, and not even allowed to discharge her mails to the *Messagerie*.

"The *Cossack* arrived on the 20th of July and was put in quarantine in the outer roads, having communicated with Zanzibar, where the disease was known to be prevalent up to a recent date. She was, however, admitted to pratique after a few days, having satisfied the commissioner that no recent outbreak had occurred at Zanzibar; and having communicated and discharged our supernumeraries, we

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resumed our voyage on the 9th of July and arrived at Zanzibar on the 24th of that month.

“Cholera had now entirely ceased here, and no case of it had been known to occur since June last. The opposite coast of the main land of Africa, between Cape Delgado on the south, and Brava on the north, where the epidemic also proved very fatal, had been reported quite free from the disease. It was still lingering at Brava.

Much farther north it may have extended through the agency of dhows resuming the coast trade on the return of the south-westerly monsoon. No recent information had reached Zanzibar.

“The latest news from the Mozambique reports the disease still prevalent in that city, and in many of the coast villages in the Portuguese dominions. Early in January 1870 cholera had visited Johanna and the Comero Islands, but no late information had been received at Zanzibar as to their present condition, nor was it known whether the disease had extended to Madagascar.

“Nos Beh and Mayotta had escaped, and no case of it had occurred at Seychelles. It is deserving of notice here that these places were placed under quarantine regulations at the first outbreak of cholera at Zanzibar, and that the Mozambique, where similar restrictions were enforced, escaped until May, some six months after its first appearance on the coast; and there is good reason to believe that this check was owing to the same precautions which have secured for Seychelles, Nos Beh and Mayotta, entire immunity from cholera.

“With the panic-stricken people of Zanzibar the late epidemic had been the all-absorbing topic. It was estimated by the natives that as many as 30,000 persons were carried off in the town of Zanzibar alone. Since there is no census taken of the population, and no record of deaths kept, I am inclined to think that Dr. Kirk's estimate of ten to fourteen thousand is more correct. It is by him that these remarks were mainly furnished, and they may therefore be considered as pretty correct.

“The first outbreak was attended with the greatest numbers attacked, and with the greatest mortality, as many as three and four hundred persons being carried off daily in the early part of December 1869; after this the numbers began to fluctuate, increase, diminish, intermit, decline, and finally to cease altogether in June 1870. It was equally, if not more virulent amongst the shipping in the harbour; some vessels were forced to put back into Zanzibar, having lost more than half their crews within a few days after leaving port. This fatality amongst the mercantile shipping occurred at a later period, and when the disease began to decline on shore.

“The poorer classes suffered most. The slaves and negro population were almost the sole sufferers at first; a little later the poorer Arabs, and later still the richer Arabs and Europeans. It had been remarked that the purer the African type, and the lower in the scale of civilisation, the greater aptitude did they seem to possess for catching the contagion, the greater severity did it show, and the more fatal did it prove. Recent arrivals (and this remark applies to Europeans as well as to natives) were noticed to be especially liable to the disease. Persons shifting quarters or otherwise attempting to

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to fly from the disease showed also a remarkable susceptibility to the contagion of cholera.

"The epidemic had also severely smitten the opposite coast of the mainland, and although there are no means of forming even a rough estimate of the number of deaths, yet from the circumstance that twenty-eight fatal cases occurred in the establishment of the Catholic Mission at Bagamayo; and considering that great care and attention is bestowed upon these, we may imagine the mortality amongst the poverty-stricken population along the coast villages between Cape Delgado and Brava, deprived of the necessaries, not to say the comforts of life.

"To any person acquainted with the town of Zanzibar, it can be no cause of surprise that cholera or any other infectious disease should prove very destructive, after having once entered it. It is especially the abode of vice and filth, and the hotbed of disease. Its streets are narrow and dirty, and reeking with the stench of human excrements, which are generally deposited at the doors, and around their dwellings. The exhalation from animal and vegetable matter, decomposing and seething under the burning heat of a tropical sun, and giving off volumes of poisonous gases, pollutes the atmosphere far and wide, and supplies suitable food and fuel for the pestilence.

"The water obtained from any part of the island is said to be bad, and to possess purging qualities; that obtained from the wells in the town is highly brackish. I cannot say that I have tested or even tasted this water, but from what I have learnt, as well as from the situation of the town, on a low flat spit, in high tides almost entirely surrounded by water, and that its surface is composed of sand situated on a coral foundation, I cannot but think that whatever freshness this water may possess is in a great measure derived from occasional rainfalls, and from the refuse water brought from distant parts of the islands by Europeans and rich natives, after having done the work of flushing latrines and sewage, as well as other cleansing and domestic offices. The wells and cesspools lie, in many instances, side by side, and the fluid contents of the latter can have no difficulty in finding their way into the former without undergoing any very refined process of filtration. The stream waters are said to contain salts of lime, and to throw down a thick white precipitate on standing; their purging qualities are probably due to the presence of decomposed organic matter, which the luxuriant growths of the island and their rapid decay under the influence of moisture and a high temperature must abundantly supply to it.

"No public interest is taken in the sanitary condition of the town; no municipal precautions against the advent of disease; no means adopted to relieve the sufferings of sickness or the distress of poverty. There are no burial regulations; the dead are buried at their very doors; the interment is deep or superficial, as the case may be, or perhaps no burial at all is effected, as in the late epidemic, when bodies were in many instances left to rot on the beach. The garments of the deceased were generally sold at the bazaar shortly after their removal from the body, and thus the seeds of the disease were scattered broadcast over the island. It is hard to admire an

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administration which permits such revolting scenes, and yet there appears not the least prospect of improvement.

"The English consul, in the interest of the English and foreign residents, set apart the gaol as a hospital during the height of the cholera, and many Europeans and foreigners from the shipping in the harbour were treated in this building. The hospital of the Catholic Mission also afforded shelter and treatment to many persons of all classes during the epidemic.

"A scourge so formidable, and attended with such heavy loss of life, very naturally suggests an inquiry into its history and progress; whence did it come; by what road did it travel; where was its primary focus; had it been imported, or was it of purely African growth?

"These were the questions to which I sought answers, and to which my inquiries were principally directed.

"As in many other outbreaks, the origin and history of the present epidemic are very obscure. A great deal of this depends on the remote region which it has invaded, as well as upon the want of precise information from the people inhabiting these distant countries, by whom it was known to have been conveyed in the first instance to the coast.

"Dr. Kirk, an old African traveller, and a man well acquainted with the south-east portion of that continent, and thoroughly conversant with the mode of life and habits of the people of these parts, states that the disease had in the first instance reached Zanzibar from Pangany, and that it had been introduced into the latter place from the interior of Africa.

"As early as the month of September 1869 some very fatal disease had been known to exist in the Masai country (a country lying south-west of the Gallas) in the interior, where it had been committing great havoc long before it reached the coast.

"The first case known on the coast happened, as before noticed, at Pangany. This town is situated on the mainland opposite to, but a little to the north of the island of Zanzibar, and is the terminus of a great caravan route to the ivory and trading countries in the interior, and it was by this road that cholera had been conveyed to Pangany.

"The first case known in the island of Zanzibar occurred in a small village on the north-west coast of the island, opposite Pangany, and where dhows, trading between this latter place and Zanzibar, usually anchor. The next appearance of the disease happened in the town of Zanzibar; next, the disease broke out at Mombas, north of Pangany, on the mainland; after this, the disease became general, attacking the various towns and villages on the coast along the south till it reached Quiloa, where it lingered for some time before invading the Mozambique and the Portuguese dominions.

"Dr. Kirk has no doubt that this epidemic reached the coast from the interior, and that it in every instance followed in the path of human intercourse and in the wake of trade. He also states that it was carried back again into the interior by another great caravan route, beginning at Bagamayo and traversing the Umjam-neri. The route thus traversed lies parallel to, but considerably to the

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the southward of the Pangany route. He states that it made no headway at first against the north-east monsoon, having got no farther north than the village of Lamo on the coast; but this he attributes, not to the winds, but to the suspension during this period of dhow trade from the south: for, on the return of the south-west monsoon, it extended northward along the seaboard of the Sultan's dominions as far as Mukdeesha, about two degrees northward of the line, the farthest point north from which any information has reached Zanzibar.

"Now we have traced the epidemic to the Masai country in the interior of Africa, but how it got there it is much more difficult to find out. Was it introduced from India direct, or by the Red Sea, or did it get there, as some think, from the West Coast of Africa by land, or was it conveyed thither in ships round the Cape? To these questions there appears to be at present no means of returning a decisive answer. Its advent from the Gambia overland appears to be against all probability, especially when we consider the geographical relations of these two places; one in the extreme north-west, the other in the extreme south-east part of the great African continent; separated from each other by lofty mountain ranges, burning ascents, impenetrable forests, wide lakes, and rapid rivers; a country devoid of roads and of every facility of human intercourse, it is difficult to imagine that it has been conveyed over that vast area of country. Its passage by the Cape is not more probable, and directly opposed to what is positively known of its prevalence in the interior of Africa previous to its appearance on the east coast, or at Zanzibar, a circumstance not easily understood, on the supposition that it was introduced by this road.

"Cholera had no doubt existed at Hyderabad and extended to Kurrachee towards the end of '69, following the course of the Indus, and from this port it might have been conveyed to the south-east coast and to Zanzibar.

"Yet since it had been known to have existed in the Masai country as early as September '69, and at a season when the south-west monsoon puts a stop to all intercourse between Kurrachee and the African ports on this coast. On the supposition that this was the route taken by the epidemic, it must have been introduced previous to the commencement of the south-west monsoon, and the difficulty would still remain how to explain the immunity of the coast through which it must have travelled in getting to the interior.

"Arabs and eastern merchants trading with Abyssinia by the Red Sea may have conveyed the disease into the Galla country, and thus to the neighbouring country of the Masai. The objection to this is that I am not aware that the disease did exist in any of the Abyssinian ports in '68, nor had I heard of its prevalence there in '69, although I had some opportunities of hearing, had it existed, being then for some months in Bombay.

"It can be seen therefore that neither of these routes satisfactorily explain the introduction of cholera into the Masai country, in fact that they are almost entirely opposed to such a view. The only question we have to consider, therefore, is its origin, "*de novo*," in the interior of Africa; from what I can gather my own ideas are in favour of this presumption.

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"No doubt the majority of medical men at the present day maintain that every outbreak of cholera, in whatever portion of the globe it may appear, can be easily traced and connected, link by link, with some outbreak in its "endemic home" (as it is called) in India; some men going so far as to consider Lower Bengal as the only endemic area and home of cholera.

"There are no doubt many good reasons for this view of the question, and some evidence to support it. It must be admitted also that this doctrine is far from being established with certainty, and so long as any doubt remains, and remain it certainly does, the probability of its origin, "*de novo*," cannot oppose any principle of nosology, nor involve any medical heresy. Very little is really known of the physical features of the interior of the vast continent of Africa; still less of its geological or meteorological condition, and absolutely nothing of the history of its nosology. These are factors that all must admit play an important part in the outbreak and spread of cholera, and these are points that must not be forgotten in the question of regarding Bengal as the only source and home of cholera.

"In the accounts of the outbreak of cholera on the West Coast in 1868, it is supposed to have been introduced there from Morocco through the agency of caravans, and the general impression seems to be in favour of connecting it with the great outbreak in Alexandria in 1865.

"In a number of the 'Lancet,' dated the 21st of August 1869, the following remark is made, which appears to me to have some bearing on the question of its origin '*de novo*.' The paper states: 'It is remarkable that on the Gambia as on the Senegal, the epidemic, according to our present and fairly trustworthy information, appeared *first inland*.'

"It is also noticed that the disease advanced to seaward, and yet but little stress is laid on this fact, and indeed seems to be entirely ignored in deference to the old time-honoured custom of connecting every outbreak of cholera with its home in the East; the difficulty, too, of crossing the desert from Morocco, will be readily admitted, even by the most strenuous advocates of contagion.

"Of the contagious nature of cholera and its rapid spread through the medium of human intercourse, there appears to be much less doubt, as well as that its progress has been checked, and in some instances entirely stopped wherever sanitary and strict quarantine regulations have been vigorously enforced, as in the case of Seychelles, Nos Beh, and Mayotta, already noticed, as well as the prevalence of the disease, apparently when such precautions have been neglected. A practitioner at Zanzibar informed me that the late epidemic here afforded peculiar opportunities of observing the highly contagious nature of cholera. The population, composed of a mixture of various castes and races of various customs and habits of life, some highly social and keeping up a very intimate intercourse amongst themselves, as well as with foreigners, paying constant visits to their sick friends and attending their wakes and funerals; others, such as the Banyans, whose rules, both in reference to their own and other castes, enforce the utmost seclusion.

"Amongst

“ Amongst the former, cholera committed great havoc, whilst the latter enjoyed a very remarkable immunity from the epidemic.

“ It was remarked that the Banyans used the town water almost exclusively, and thus it was thought that water could have little or no share as a medium for propagating the disease. The statement appears certainly remarkable, and should it prove correct, the immunity which the Banyans enjoyed can only be accounted for on the supposition that exclusiveness in caste implies exclusiveness in dwellings; the use of water, and all minor particulars; and that the wells are less likely to be contaminated with infected dejecta, or perhaps these people, being in better circumstances, are better in health also, and thus better able to resist the action of contagion; for this immunity in the better classes was a subject of general remark. Although the dwellings of the Banyans are not models of cleanliness, yet their social habits tend materially to protect them from the contagion of infectious diseases; at meals they use the leaves of trees instead of dishes, casting the leaves and fragments of their food to the cattle after they have finished, and thus lessening or entirely removing the chance of infection. There are some reasons for the belief that water plays some part in extending and intensifying the spread of cholera, and the water of this island is generally allowed to possess purging qualities. A gentleman here who has peculiar opportunities of observing its effects on large numbers of young negroes, confirms this statement. He makes the remark also that they suffer from looseness of the bowels, on changing to a dietary to which they are unaccustomed, showing a great irritability of the bowels of these races at Zanzibar.

“ At Zanzibar the general features and symptoms of cholera are familiar to all, and in this respect there have been unhappily but too many facilities for study and observation; their enumeration at second hand would, however, be of no practical value here. It may be worth noticing however, in passing, that cramps were not common amongst the negro and Asiatic races who had suffered from cholera, whilst in the case of six Europeans, on the contrary, severe cramps and spasms affecting the trunk and extremities, proved the most distressing symptoms, and in these cases also suppression of urine and delirium were very general, related to each other, perhaps, as cause and effect. I have heard from a medical practitioner that large numbers of round worms were voided by the sufferers from cholera. This he regarded merely as a coincidence, and noticed the fact simply to show the large number of persons who suffer from worms, and who continue, notwithstanding, in good health, and in the total ignorance of their existence.

“ I could collect no evidence as to the use of alcoholic stimulants; this arose principally from the poverty of those who suffered most from the disease, and who consequently could afford no such luxury, and partly to the objection of a great many to its use on the grounds of caste and religion; and partly also to the circumstance of their being ill-borne in consequence of the great irritability of the stomach which affected a large proportion of cases. He states, however, that so far as his experience went, he was disposed to consider the use of stimulants and wine advantageous, on the whole; while the

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use of carbolic acid (in glycerine, I think he said,) he considers highly beneficial; for besides the physiological action in allaying the irritability of the stomach, he imagines it possesses some chemical action in neutralizing the poison of cholera, whatever that may be.

"He states that fully one-half of the cases treated in the building before referred to, proved fatal, but it must be remembered that nearly all arrived there in a state of collapse after the favourable moment for treatment had passed by. In a large majority of the natives collapse set in early, almost the first symptom, and such cases generally proved fatal.

"Such are the chief gleanings gathered in this inquiry, and the report is forwarded in the hope that it may supply any deficiency of official information arising from the difficulty that has for some time existed of holding direct communication with the island of Zanzibar."

The fatal case of cholera in the Malabar occurred in the person of an officer who it is said must have contracted the disease at Bombay, where it was prevailing at the time, although not in an epidemic form. He was a bad subject for any such affection as cholera, having for some years suffered from dyspepsia, the most distressing symptoms of which were vomiting and diarrhoea. On the 9th of April he went on shore, and came off in the evening to dinner; he retired to bed about 10 p.m.; in the middle and morning watches he was heard vomiting, a common thing with him; he made no complaint. The surgeon* says:—"I saw him of my own accord about 8h. a.m. on the 10th; he complained of vomiting and purging, and looked drawn. I ordered him a pint bottle of champagne; he took some of it, but vomited the whole or most of it. When seen again by me, between 9h.30' and 10h. a.m., he had most decided symptoms of Asiatic cholera. The choleraic aspect and voice were apparent; cramps were felt; rice-water stools passed; vomiting was frequent; the skin was bluish, cold, and clammy; the pulse was feeble, and the urine suppressed." He was removed from his cabin to the Seaman's Hospital, and placed in a warm bath at a temperature of 102° for five minutes; he had less cramps when taken out; every effort was made to stimulate the vital powers, but without effect; collapse set in; the pulse became almost imperceptible; there was occasional wandering delirium; the urine was entirely suppressed; the breathing became much laboured, and he died at 7h.30' a.m. of the 12th without any apparent symptom of pain.

II. General Diseases.—Section B., Constitutional Group.

Class II.
Sect. B.

Under this head 444 cases of various forms of disease were entered on the sick-list, of which thirty-three were invalided and one proved fatal.

Rheumatism.—There was a considerable increase in the ratio of cases of this disease compared with the preceding year, but the invaliding

* Surgeon Thomas Colan, M.D.

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validing rate was lower, and it caused no mortality. Two hundred and twenty-three cases altogether were under treatment, of which twelve were invalided. The average duration of each case on the sick-list was about eleven days. The vessels which had the largest number of cases of this affection were the Forte, the Jumna, and the Malabar.

In the Forte there were thirty-nine cases of rheumatism, and of these twenty-nine were discharged to duty, four were sent to hospital, three were invalided, and three were under treatment at the end of the year. They were nearly all chronic cases, and some of them resisted all treatment. A few were undoubtedly of a syphilitic origin.

In the Jumna, in which there were also thirty-nine cases of this disease, some of them were complicated with pericarditis, for which reason two of them had to be invalided. The greater tendency to heart complication in these cases was considered to be due to the high temperature of the Red Sea, in which the vessel was so much employed.

There were thirty-seven cases of rheumatism in the Malabar, the great majority of which were placed on the sick-list in Bombay Harbour. The medical officer says that the damp air of that locality, during the months the monsoon blows, is unfavourable to persons liable to the chronic form of the disease, and tends to induce acute attacks in healthy persons.

Syphilis, Primary and Secondary.—One hundred and thirty-nine cases of primary syphilis and forty-nine of secondary syphilis were entered on the sick-list during the twelve months, of which one case of primary and eight of the secondary form of the disease were invalided. Compared with the preceding year there was a considerable increase in the ratio of cases of the former disease, but that of secondary syphilis was much lower. The invaliding rate for both diseases combined was much higher than in 1868. The vessels in which the largest number of entries on the sick-list from these affections occurred were the Daphne, the Forte, the Jumna, the Nymphe, and the Octavia.

In the Daphne there were seventeen cases of primary and four of secondary syphilis. Hardly any information whatever is given in connection with them.

In the Forte there were eighteen cases of primary syphilis and ten of secondary. Two of the cases of primary disease appear, however, to have been contracted at Simon's Town. Of the remainder, five were contracted at Bombay during the Midsummer quarter: nine at the Seychelles Islands during the Michaelmas quarter; and two at Suez during the Christmas quarter. They were all discharged to duty. The surgeon says that both at Bombay and the Seychelles venereal diseases were extremely prevalent, but that at Simon's Town the Contagious Diseases Act was in operation, and probably to that circumstance might be attributed that such a small number of cases appeared there, as the men were frequently on shore on

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leave. At Bombay, he says, the prostitutes have lately been placed under the surveillance of the police, but that at the Seychelles Islands it would be scarcely practicable to introduce an Act of the kind, so general is the immorality that prevails. With respect to the cases of secondary disease, he observes, that in all, the primary disease was contracted either at Portsmouth or Plymouth before the men joined the ship.

In the *Jumna*, in which there were twenty-two cases of primary and seven of secondary syphilis, the former disease was contracted chiefly at Bombay and Suez. At the latter place some amount of sanitary control is said to be exercised over the prostitutes, but at Bombay, so far as the medical officer could ascertain, a public register only is kept for the purpose of taxation, which of course as many as can, evade.

There were twenty-one cases of primary syphilis, and three of secondary syphilis in the *Nymphe*, concerning which the medical officer* observes:—"There has been a great increase in the number of syphilitic cases this year, caused by the infection of the town of Mahé, Seychelles, by Her Majesty's ship *Octavia* and a French squadron, after the termination of the Abyssinian Expedition. Most of the leave given to the crew of the *Nymphe* in 1869 was passed at this place, and, in 1868, previous to the arrival of the *Octavia* and the Frenchmen, free leave had also been given, without a single venereal case resulting."

There were fifteen cases of primary and eight of secondary syphilis in the *Octavia*, but no information is given in connection with them.

III. Diseases of the Nervous System and Organs of the Special Senses.

Class III.

One hundred and twenty-five cases of various forms of disease were entered on the sick-list under this head, of which ten were invalided and five proved fatal. Of these latter, two resulted from apoplexy and three from sunstroke. One of the cases of apoplexy and all the cases of sunstroke appear in the returns from the *Forde*. In that vessel the apoplectic seizure occurred in the person of an officer on the voyage from Simon's Bay to Trincomalee. He was of very intemperate habits, and had been on duty in the engine-room, the vessel being under steam. On coming off watch he complained of "nervous excitement." Though he spoke quite collectedly, he had evidently been indulging in spirituous liquors a short time previously; the pulse was much accelerated, and there was great heat of skin. A chlorodyne draught was given him, and he went to bed. At 11h. p.m. he was seized with strong convulsions, and immediately afterwards fell into a state of profound coma. The breathing was stertorous; the pulse at the wrist scarcely perceptible;

* Surgeon John Noble.

ceptible; the carotid arteries throbbing violently; the pupils much contracted, and there was pungent heat of skin. Two hours afterwards he expired.

On post-mortem examination of the body, the head only was examined. The longitudinal sinus was gorged with blood, which after death, flowed from the nostrils. The arachnoid was thickened, and morbidly adherent in several places to the dura mater and to the surface of the cerebral hemispheres by lymph deposits. Both the cerebrum and cerebellum were in a state of ramollissement. There was no increased amount of fluid in the ventricles. Besides these signs of old standing meningeal and cerebral disease, the brain generally was highly congested. On slicing the cerebral substance, the cut ends of the vessels appeared as numerous red points. There was no trace of a clot.

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Class III.

Sunstroke.—There were twenty cases altogether of this affection in the squadron, of which, as has been already said, three proved fatal. Three cases occurred in the Cossack, soon after her arrival on the station. They were of a very trivial character, and required little or no treatment.

In the Dryad there were six cases of sunstroke. Four of these occurred during the Midsummer quarter, while the vessel was employed on the Arabian coast. One of these was of a rather severe character, and resulted in the invaliding of the subject of it.

There were three cases of sunstroke in the Euphrates. They occurred when the vessel was in the dry dock at Bombay. One of them was of great severity, and resulted in the subject of it being invalided. The medical officer reports that the man "was seized with sunstroke on the afternoon of the 4th of May, at Bombay, while coming off in the boat from the dockyard, where they had been at work all day; the ship was then in dry dock, and the weather was exceedingly hot. He continued in a state of stupor and partial insensibility for twelve hours. Frequent cold affusion of iced water over the head afforded him great relief, and was the only means of restoring him to full consciousness. For several days afterwards he suffered from severe headache, and much disturbance of the sensorium, vertigo, insomnia, and occasional nausea and vomiting. He also, in the course of treatment, complained of severe nocturnal pains of the left leg, knee, and foot, apparently of a neuralgic character, and these pains continued to afflict him to the last. He lost flesh, and became anæmic; it was evident that his nervous system was so impaired that nothing but change of climate could restore it."

There were six cases of sunstroke in the Forte, three of which proved fatal. With respect to five of these, the surgeon says, "During our stay at Aden in June, where the temperature was excessively high, five men were attacked with *coup de soleil*. They had all been on shore on leave. One man was found lying dead on the road. The post-mortem examination showed that the lungs were highly congested, and the right cavities of the heart gorged with

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with blood. He was a very powerful, healthy man. He had been drinking, as a small quantity of spirits was found in his stomach. Another man was found on the beach in a state of insensibility. He died in about an hour after he was brought on board. Death was by syncope.

"Of the remaining three cases, two were subsequently invalided for climatic debility, and the third, a Marine, still remains in the ship, and now enjoys very good health. . . . On the 3rd of October, during our voyage up the Red Sea, there was another death from sunstroke. The symptoms were precisely similar to those observed in the men who died at Aden."

There was a single case of sunstroke in the Jumna. Although the man made a rapid recovery, his symptoms were very severe and alarming. While under an awning at work on deck, he was attacked with vertigo and faintness, and fell down. The sun was powerful at the time, and the awning was thin. His face was pale and the features pinched. There was loss of temperature, and a weak, fluttering pulse. He was a healthy man, and very abstemious. Ammonia and brandy were given him, and he recovered in two days, but he suffered for some time from a feeling of weakness in the limbs, the result of loss of muscular power.

There was a single case of sunstroke in the Malabar, and it was of a trivial character.

Encephalitis.—A single case of this disease appears in the returns from the Daphne. It occurred in the person of a petty officer, and was the result of his being seriously injured on the 1st of June by the falling of a sail-tackle block from aloft, the block striking him on the upper and left side of the head. He fell senseless, but recovered in about half an hour.

During the first few days the prominent symptoms were giddiness and sharp shooting pain in the head. There was no paralysis. The pain each day became duller; the patient slept a good deal, but constantly started from his sleep, and was at times delirious. The sense of hearing was lost in the left ear. Cold was applied to the head, and, purgatives having been freely administered, calomel, in two-grain doses every third hour, was ordered, until a slight effect was produced on the gums. Two grains were continued at bedtime for ten days subsequently. On the 1st of July a blister was applied to the back part of the head, and repeated at intervals with apparent benefit.

On the 16th of August he requested to be allowed to try a little light duty, but on the 17th he came back complaining of much pain in the head. He was put on the list, a purgative draught given him, and a blister applied. Cold also was applied to the head. On the 18th he had an epileptic seizure, the convulsions being very severe, and their duration nearly twelve minutes. On the 19th delirium ensued. He slept much, but constantly started out of his sleep, and looked round in an excited manner. Calomel was again administered, and under its influence he improved, partial paralysis of the left leg remaining, with loss of hearing in the left ear, and giddiness.

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The medical officer,* from whose notes the foregoing abridgement of the case has been made, says: "On the 15th of September the temperature of both legs was noted. Sound leg, thermometer laid on upper and inner part of thigh, and retained for thirty minutes, 97°; ditto, left leg, 92°. On the 16th, temperature of right leg, 96°; of left, 91°. September 30th; he improves in health; leg gets more power; sense of hearing improves. As there was little probability of his being fit for further service on this station, he was brought forward for survey, and invalided on the 14th of October."

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IV. Diseases of the Circulatory System.

Thirty-eight cases of various forms of disease were entered on the sick-list under this head, and of these, eleven were invalided and six proved fatal. There was a considerable reduction in the ratios of cases and of invaliding, compared with the preceding year; but the death-rate was much higher. Of the fatal cases, five were the result of organic disease of the heart, and the sixth of rheumatic pericarditis. This occurred in the person of a Krooman of the Cossack, who, on the 2nd of September, was placed on the sick-list for rheumatic pains in the shoulders and loins. On the same day he attempted suicide by jumping overboard, but he was rescued by the other Kroomen. Nothing of importance occurred thereafter until the night of the 4th of September, when he was suddenly seized with pain in the left side, accompanied with dyspnoea. His face was bathed with large drops of perspiration; the skin cold; the pulse rapid and small; and the sounds of the heart scarcely audible. Despite the treatment to which he was subjected, the dyspnoea rapidly became more urgent, accompanied with an intermittent pulse, and at 12 h. (midnight) he died convulsed. The following report of the post-mortem examination of the body is by the surgeon† of the ship:—"Body, well nourished, with good muscular developement. Rigor mortis well marked. On removing the sternum after cutting through to the costal cartilages, the pericardium was found distended with fluid of a light straw colour, measuring twenty ounces. The heart itself was enlarged, bled freely when cut into, and its muscular substance was friable, and easily broken down by the finger. Both mitral and tricuspid valves were thickened, but their surfaces were unencumbered with lymph deposits. The lungs were pale in colour, but free from disease. The liver and spleen both enlarged. The kidneys were healthy, as were also the remaining viscera. Death was probably caused by metastasis, suddenly followed by rapid effusion into the pericardium."

Class IV.

V. & VI. Diseases of the Absorbent System and Ductless Glands.

Fifty-seven cases of sympathetic bubo appear under this head, probably the result of climatic cachexia. The average duration of each case was over three weeks.

Classes
V. & VI.

*Acting Surgeon Wm. E. Dillon.
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† Surgeon Frederick Piercy.
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VII. Diseases of the Respiratory System.

Class VII.

Under this head 269 cases of disease were entered on the sick-list, 237 of which were of a simple catarrhal character, each case averaging in duration five days.

A fatal case of pneumonia occurred in the person of a petty officer of the Jumna, a worn-out man, prematurely old from long service, and in all probability from intemperate habits. He had no rallying power, and sunk from sheer exhaustion.

VIII. Diseases of the Digestive System.

Class VIII.

Under this head, no fewer than 995 cases of various forms of disease were entered on the sick-list, including 227 of dyspepsia, fifty-three of dysentery, and 456 of diarrhoea. Of the total number of cases, nineteen were invalided, and eight proved fatal.

Dysentery and Diarrhoea.—The vessels in which the largest number of cases of these affections occurred were the Daphne, the Forte, the Jumna, and the Star.

There were twelve cases of dysentery and thirty-four of diarrhoea in the Daphne, and of these, three of dysentery proved fatal. They occurred chiefly in the months of July and August, when the vessel was in the vicinity of the Mozambique Channel; and of the fatal cases, one occurred in the person of a seaman who was convalescing from a long and severe attack of fever, and another in a worn-out old native interpreter.

In the Forte there was one case of dysentery and seventy-six of diarrhoea. The former disease occurred in the person of a bandsman, when the vessel was at Suez, at a time when diarrhoea was very prevalent amongst the ship's company. It was in fact originally a simple attack of diarrhoea, but dysenteric symptoms supervened, with much fever and frequent muco sanguineous stools. Under the influence of large doses of ipecacuan he made a good recovery.

With respect to the cases of diarrhoea, the surgeon says:—"There were seventy-six cases of diarrhoea, all of which were discharged to duty. Of these, nine occurred in the Lady quarter, five in the Midsummer, twenty in the Michaelmas, and forty in the Christmas quarter. During our stay at Suez (from the 16th of October to the 2nd of December), diarrhoea prevailed to a very great extent. Although no more than forty were placed on the sick-list, nearly every one in the ship suffered more or less from bowel complaints. The prevalence of the complaint probably arose from two causes; 1st, the comparatively low temperature, especially at night, which was experienced there; and, 2ndly, the use of the water which was procured from the fresh water canal, and contained much organic impurities. We were in dock for some time, and then it was of course impossible to condense water. To remedy the ill effects of the

the water from the canal, that intended for drinking was boiled in the coppers and filtered. This plan is followed by the English inhabitants of Suez. The results of this were very beneficial, and the number of cases of diarrhœa decreased. As soon as practicable distilled water was used. The average duration of sickness was about five days."

There were thirty cases of dysentery and 101 of diarrhœa in the Jumna. One case of dysentery proved fatal. The surgeon speaks favourably of the influence of ipecacuan in these affections, which he considers to have been mainly attributable to hepatic derangements.

There was a single case of dysentery and fifty-eight of diarrhœa in the Star. The former was placed on the sick-list on the last day of the year. Although not very severe it ultimately necessitated the invaliding of the subject of it. The cases of diarrhœa were for the most part of a trivial character, and depended chiefly on errors of diet and hepatic derangement.

There were two fatal cases of bowel affection in the Cossack, one of dysentery, the other of diarrhœa. In the latter instance the disease was complicated with ascites. It occurred in the person of a Krooman, who was placed on the sick-list on the 7th of October for diarrhœa, for which he was subjected to the usual treatment in such cases. On the 14th he complained of pain at the umbilicus, and the abdomen appeared to be swollen. The tongue was clean but glassy, the skin hot and dry, and the appetite good. Jalap purges and diuretics were administered with apparent advantage, the abdomen decreasing in size, and the patient expressing himself as feeling better. In this condition he was discharged to sick quarters at Mahé in the Seychelles Islands, where he died on the 19th of November. On post-mortem examination of the body, the intestines were found glued together by old adhesion, the result of a former attack of peritonitis.

The fatal case of dysentery occurred in the person of an officer of a weakly constitution, who was placed on the sick-list on the 18th of August, at Trincomalee, with dysenteric diarrhœa of a very severe character, accompanied with much febrile disturbance. He became reduced to such a state of debility and emaciation, that it was deemed advisable to have him removed from the station as soon as possible. With this view he was invalided and sent on to Madras to catch the English steamer. At Madras his symptoms became so aggravated, that he was conveyed to the General Hospital there, where he died on the 2nd of September.

A fatal case of diarrhœa appears in the Returns from the Malabar. It was of a somewhat peculiar and complicated character, and its history is best given in the following report and remarks, by the surgeon of the vessel. The patient, an officer, " . . . a fat and nervous man was placed on the sick-list on the 14th of March, when the ship was lying in the harbour of Bombay. He came on board on the 12th, from leave, feeling unwell on that and on the

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following day. During the night of the 13th, and morning of the 14th, he was violently purged, and administered to himself, without medical advice, two half-drachm doses of chlorodyne, after which the purging stopped. When seen by me at 8 h. a. m. of the 14th, he complained of severe vomiting, and much abdominal uneasiness. About 10 h. a. m. he was removed to the Seamen's Hospital. He had most severe cramps in the limbs, and vomited. Opiates and brandy, with iced water, and the application of synapisms, and tins containing hot water, to the affected parts, seemed to remove the vomiting, but the cramps recurred from time to time.

"On the 15th the patient appeared restless and feverish, and there was considerable muscular tremor of the arms. Weak brandy and water, beef tea, and an opiate at night were given. Next day he appeared more composed, and slept at intervals. He partook of some food, and had an opiate at night. On the 16th he appeared to be doing fairly, and gave no cause for uneasiness. Took wine, arrowroot, &c.

"On the 18th, muscular tremor and loss of power in the voluntary muscles were apparent, and though some vomiting occurred, the bowels were rather confined. An aperient was given in the evening. During the night there were two motions. Next day there was actual palsy of the arms, so much so, that in the evening a tumbler could not be held, but fell from the hands. However, some sago and beef tea were taken in the course of the day.

"On the 20th, the aspect of affairs looked very bad towards evening. The limbs were very powerless, and there was a frightened appearance about the patient. The case was a very curious one, as nothing like it had appeared on board before, and there was no delirium tremens. Between 10 h. and 11 h. p. m., the mind wandered, the pulse beat very fast, the legs seemed utterly powerless, and the arms nearly so. The breathing was hurried. At 11 h. the head was shaved, and iced water applied to it; but all was of no avail, for death took place at 12 h. 20 a. m. of the 21st.

"I am at a loss to account for this case. It is worthy of remark, that this officer slept for two hours on shore, on flagstones under a verandah. What is called the 'Land Wind' was blowing, and it is a belief, in Bombay, that that wind sometimes causes paralysis, by its effects on the body. When I was serving in the *Beagle* in 1861 and 1862, on the coast of Ceylon, I have heard of horses becoming paralysed, or what was called 'land-struck' by the wind at night. I have seen a case, lately, of paralysis of the legs, and one side of the abdomen, said to have been caused by this wind. I know of no treatment for the affection."

IX. and X. Diseases of the Urinary and Generative Systems.

**Classes IX.
and X.**

Under this head 121 cases of various forms of disease appear in the Return, of which six were invalidated. Very few of the cases were of any importance. Seventy-one cases of gonorrhœa were under treatment, the average duration of each case being nineteen days.

XI. Diseases of the Organs of Locomotion.East India
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Nine cases of various affections of the bones and joints were entered on the sick-list, all of which were discharged to duty. The average duration of each case was between nine and ten days.

Class XI.

XII. and XIII. Diseases of the Cellular and Cutaneous System.

Of 868 cases of various forms of disease entered on the sick-list under this head, 547 were cases of boils and abscesses, and 286 ulcers. The average duration of each case of boil and abscess was eight days; and of each case of ulcer, somewhat over seventeen days. Of the total number of cases there were invalided, two for ulcer and one for obstinate chronic eczema, which had resisted long-continued treatment.

Classes XII.
and XIII.**Unclassed Diseases.**

Under this head seventy-six cases of debility, one of lead poisoning, and six of delirium tremens, were entered on the sick-list, and of these, twenty-two cases of debility, or more strictly speaking, perhaps, climatic cachexia, were invalided.

Of the cases of delirium tremens two occurred in the persons of commissioned officers; two in Marines; one in a stoker; and in one case the rating has not been given.

Wounds and Injuries.

A man was killed by falling down the fore hatchway of his ship, a distance of about eight feet. His death was almost immediate, and was supposed to have resulted from either dislocation or fracture of one of the cervical vertebræ. A man was killed in action with some Arab dhows; a gunshot wound divided the femoral artery, and he bled to death; the nature of the injury was not ascertained, it being dark at the time, there being no medical officer in the boat, and the commanding officer being himself severely wounded. Death resulted from a severe scald of the abdominal walls, in the person of a petty officer, who, while lifting a mess kettle full of boiling water from the galley, slipped and fell, receiving the contents of the kettle over his abdomen, back, and thighs. He sank in twelve hours.

Five men were drowned; two by falling overboard; two in attempting to land in a surf; and one in attempting to swim off to his ship.

The total number of deaths was thirty-one, which is in the ratio of 13·4 per 1,000 of force, being an increase, compared with the preceding year, equal to 1·6 per 1,000.

East India
Station.

Invalided.

Under General Diseases, Section A., fourteen persons were invalided, viz., two for enteric fever; one for ague; and eleven for remittent fever. Under Section B., thirty-three persons were invalided, of which twelve were for rheumatism; one for primary syphilis; eight for secondary syphilis; and twelve for phthisis pulmonalis. Ten persons were invalided for disease of the nervous system and organs of the special senses; eleven for diseases of the circulatory system; five for diseases of the respiratory system; nineteen for diseases of the digestive system; six for diseases of the urinary and generative systems; three for diseases of the cellular tissue and cutaneous system; twenty-two for unclassified diseases; and six for wounds and injuries of various kinds.

The total number invalided was 129, which is in the ratio of 56· per 1,000 of force being a decrease, compared with the preceding year, equal to 21·7 per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Small-pox - - - -	13	5·6	—	—	—	—
Vaccinia - - - -	2	·8	—	—	—	—
Measles - - - -	7	3·	—	—	—	—
Enteric Fever - - -	8	3·4	2	·8	—	—
Simple continued Fever -	293	127·3	—	—	—	—
Ague - - - -	72	31·3	1	·4	—	—
Remittent Fever - - -	99	43·	11	4·7	—	—
Cholera - - - -	2	·8	—	—	2	·8
Influenza - - - -	14	6·	—	—	—	—
Mumps - - - -	1	·4	—	—	—	—
Erysipelas - - - -	6	2·6	—	—	—	—
II. General Diseases, Section B.:						
Rheumatism - - - -	223	96·9	12	5·2	—	—
Gout - - - -	1	·4	—	—	—	—
Syphilis { Primary - - -	139	60·4	1	·4	—	—
{ Secondary - - -	49	21·3	8	3·4	—	—
Scrofula - - - -	7	3·	—	—	—	—
Phthisis Pulmonalis - -	21	9·1	12	5·2	1	·4
Scurvy - - - -	2	·8	—	—	—	—
Droopy - - - -	2	·8	—	—	—	—
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - -	2	·8	—	—	2	·8
Sunstroke - - - -	20	8·6	1	·4	3	1·3
Paralysis - - - -	2	·8	—	—	—	—
Vertigo - - - -	1	·4	—	—	—	—
Epilepsy - - - -	6	2·6	4	1·7	—	—
Neuralgia - - - -	30	13·	—	—	—	—
Encephalitis - - - -	1	·4	1	·4	—	—
Diseases of the Eye - -	36	15·6	3	1·3	—	—
Diseases of the Ear - -	27	11·7	1	·4	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the Heart - (Functional - Organic -)	18	7·8	2	·8	—	—
Varicose Veins - - -	14	6·	8	3·4	6	2·6
	6	2·6	1	·4	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	57	24·7	—	—	—	—
VII. Diseases of the Respiratory System:						
Catarrh - - - -	237	103·	—	—	—	—
Hæmoptysis - - -	2	·8	3	1·3	—	—
Asthma - - - -	1	·4	—	—	—	—
Other diseases of the Lungs -	29	12·6	2	·8	1	·4
VIII. Diseases of the Digestive System:						
Cynanche - - - -	78	33·9	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - -	6	2·6	—	—	—	—
Dyspepsia - - - -	227	98·6	2	·8	—	—
Dysentery - - - -	53	23·	4	1·7	5	2·1
Diarrhœa - - - -	456	198·2	—	—	2	·8
Colic and Constipation - -	91	39·5	—	—	—	—
Hæmorrhoids - - - -	16	6·9	2	·8	—	—
Hernia - - - -	3	1·3	2	·8	—	—
Worms - - - -	26	11·3	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - -	3	1·3	2	·8	—	—
Diseases of the Liver, Spleen, &c. - - - -	36	15·6	7	3·	1	·4
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	2	·8	1	·4	—	—
Diseases of the Bladder - -	1	·4	—	—	—	—
Gonorrhœa - - - -	71	30·8	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems—<i>continued</i>.						
Diseases of the Organs of Generation - - - -	3	1·3	—	—	—	—
Stricture - - - -	13	5·6	4	1·7	—	—
Varicocele - - - -	2	·8	—	—	—	—
Orchitis - - - -	29	12·6	1	·4	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c. - - - -	9	3·9	—	—	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	547	237·8	—	—	—	—
Ulcer - - - -	286	124·3	2	·8	—	—
Erythema - - - -	6	2·6	—	—	—	—
Diseases of the Skin - -	29	12·6	1	·4	—	—
Unclassed:						
Debility - - - -	76	33·	22	9·5	—	—
Lead Poisoning - - - -	1	·4	—	—	—	—
Delirium Tremens - - - -	6	2·6	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	693	301·3	6	2·6	2	·8
Burns and Scalds - - - -	52	22·6	—	—	1	·4
Submersion and Drowning -	6	2·6	—	—	5	2·1
TOTALS - - -	4,277	1,850·5	129	56·	31	13·4

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-pox - - - -	228	- - -	228	·6	·2
Vaccinia - - - -	19	- - -	19	—	—
Measles - - - -	73	- - -	73	·2	—
Scarlet Fever - - -	16	17	33	—	—
Enteric Fever - - -	164	- - -	164	·4	·1
Simple continued Fever -	1,758	- - -	1,758	4·8	2·
Ague - - - -	696	21	717	1·9	·8
Remittent Fever - - -	1,276	- - -	1,276	3·4	1·4
Cholera - - - -	3	- - -	3	—	—
Influenza - - - -	74	- - -	74	·2	—
Mumps - - - -	8	- - -	8	—	—
Erysipelas - - - -	60	11	71	·1	—
II. General Diseases, Section B.:					
Rheumatism - - - -	2,396	59	2,455	6·7	2·9
Gout - - - -	5	- - -	5	—	—
Syphilis { Primary - - -	3,529	97	3,626	9·9	4·3
{ Secondary - - -	731	- - -	731	2·	·8
Scrofula - - - -	159	- - -	159	·4	·1
Phthisis Pulmonalis - -	402	67	469	1·2	·5
Scurvy - - - -	33	- - -	33	—	—
Dropsy - - - -	6	- - -	6	—	—
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - -	2	- - -	2	—	—
Sunstroke - - - -	149	34	183	·5	·2
Paralysis - - - -	56	- - -	56	·1	—
Vertigo - - - -	1	- - -	1	—	—
Epilepsy - - - -	69	- - -	69	·1	—
Neuralgia - - - -	179	- - -	179	·4	·1
Encephalitis - - - -	58	- - -	58	·1	—
Diseases of the Eye - -	326	- - -	326	·8	·3
Diseases of the Ear - -	225	- - -	225	·6	·2

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System :					
Disease of the { Functional -	369	34	403	1.1	.4
Heart - { Organic -	212	-	212	.5	.2
Varicose Veins - - -	74	-	74	.2	—
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - -	1,160	87	1,247	3.4	1.4
VII. Diseases of the Respiratory System :					
Catarrh - - - - -	1,186	-	1,186	3.2	1.3
Hæmoptysis - - - -	43	-	43	.1	—
Asthma - - - - -	4	-	4	—	—
Other Diseases of the Lungs -	797	23	820	2.2	.9
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	479	-	479	1.3	.5
Diseases of the Mouth, Teeth, &c. - - - - -	66	-	66	.1	—
Dyspepsia - - - - -	1,072	132	1,204	3.2	1.3
Dysentery - - - - -	577	-	577	1.5	.6
Diarrhœa - - - - -	2,213	43	2,256	6.1	2.6
Colic and Constipation -	422	-	422	1.1	.4
Hæmorrhoids - - - -	109	35	144	.3	.1
Hernia - - - - -	141	-	141	.3	.1
Worms - - - - -	139	-	139	.3	.1
Other Diseases of the Stomach, Intestines, &c. - - -	44	-	44	.1	—
Diseases of the Liver, Spleen, &c. - - - - -	529	-	529	1.4	.6

TABLE, No. 2,—Showing the Number of Days' Sickness from each Disease, &c.—*cont'd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys -	121	- -	121	·3	·1
Diseases of the Bladder -	5	- -	5	—	—
Gonorrhœa - - - -	1,350	- -	1,350	3·6	1·5
Diseases of the Organs of Generation - - - -	62	- -	62	·1	—
Stricture - - - -	174	26	200	·5	·2
Varicocele - - - -	41	- -	41	·1	—
Orchitis - - - -	404	- -	404	1·1	·4
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - -	88	- -	88	·2	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	4,427	- -	4,427	12·1	5·2
Ulcer - - - -	4,845	105	4,950	13·5	5·8
Erythema - - - -	45	- -	45	·1	—
Diseases of the Skin - -	289	- -	289	·7	·3
Unclassed:					
Debility - - - -	993	10	1,003	2·7	1·1
Lead Poisoning - - - -	25	- -	25	—	—
Delirium Tremens - - -	75	17	92	·2	—
Wounds and Injuries:					
Wounds, Injuries, &c. - -	6,903	172	7,075	19·3	8·3
Burns and Scalds - - -	532	- -	532	1·4	·6
Submersion and Drowning -	3	- -	3	—	—
TOTALS - - -	42,719	990	43,709	119·7	52·

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship employed on the
EAST INDIA STATION.

CAUSE OF INVALIDING.	Bullfinch.	Cossack.	Daphne.	Dryad.	Euphrates.	Forte.	Junna.	Malabar.	Nymphe.	Star.	TOTAL.
I. General Diseases, Section A.:											
Euteric Fever - - -	-	-	-	-	-	-	2	-	-	-	2
Ague - - - - -	-	-	-	-	1	-	-	-	-	-	1
Remittent Fever - -	-	-	-	1	5	-	5	-	-	-	11
II. General Diseases, Section B.:											
Rheumatism - - -	-	-	2	-	2	3	2	3	-	-	12
Syphilis { Primary - -	-	-	-	-	-	-	1	-	-	-	1
{ Secondary - -	-	-	-	-	1	3	3	1	-	-	8
Phthisis - - - -	-	-	1	-	3	2	3	3	-	-	12
III. Diseases of the Nervous System and Organs of the Special Senses:											
Encephalitis - - -	-	-	1	-	-	-	-	-	-	-	1
Sunstroke - - - -	-	-	-	-	1	-	-	-	-	-	1
Epilepsy - - - -	-	-	1	-	-	-	-	1	1	1	4
Disease of the Eye - -	1	-	1	-	-	-	1	-	-	-	3
Disease of the Ear - -	-	-	-	-	-	1	-	-	-	-	1
IV. Diseases of the Circulatory System:											
Disease of { Functional - -	-	-	-	-	-	1	-	1	-	-	2
the Heart { Organic - -	-	1	-	-	-	1	3	1	-	-	6
Pericarditis - - -	-	-	-	-	2	-	-	-	-	-	2
Varicose Veins - - -	-	-	-	-	1	-	-	-	-	-	1
VII. Diseases of the Respira- tory System:											
Hæmoptysis - - -	-	-	-	-	-	3	-	-	-	-	3
Other Diseases of the Lungs	-	-	1	-	1	-	-	-	-	-	2

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued.*

CAUSE OF INVALIDING.	Bullfinch.	Cossack.	Daphne.	Dryad.	Euphrates.	Forte.	Janna.	Malabar.	Nymphe.	Star.	TOTAL.
VIII. Diseases of the Digestive System:											
Dyspepsia - - - -	-	-	-	-	1	1	-	-	-	-	2
Dysentery - - - -	-	1	-	1	-	-	1	-	-	1	4
Hæmorrhoids - - - -	-	1	-	-	-	-	-	1	-	-	2
Hernia - - - -	-	1	1	-	-	-	-	-	-	-	2
Other Diseases of the Stomach, &c. - - -	-	-	1	-	-	-	-	1	-	-	2
Diseases of the Liver, &c. -	-	-	-	1	-	-	2	4	-	-	7
IX. & X. Diseases of the Urinary and Generative Systems:											
Disease of the Kidneys -	-	1	-	-	-	-	-	-	-	-	1
Stricture - - - -	-	-	2	-	1	1	-	-	-	-	4
Orchitis - - - -	-	-	-	-	1	-	-	-	-	-	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:											
Ulcer - - - -	-	-	-	1	-	-	1	-	-	-	2
Diseases of the Skin - -	-	-	1	-	-	-	-	-	-	-	1
Unclassed:											
Debility - - - -	-	-	1	2	3	11	1	2	2	-	22
Wounds and Injuries:											
Wounds and Injuries - -	1	-	2	-	-	1	-	1	1	-	6
TOTAL - - -	2	5	15	6	23	28	25	19	4	2	129

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the EAST INDIA STATION.

CAUSE OF DEATH.	Cossack.	Daphne.	Dryad.	Euphrates.	Forte.	Junna.	Malabar.	Nymphe.	TOTAL.
I. General Diseases, Section A.:									
Cholera - - - - -	-	-	1	-	-	-	1	-	2
II. General Diseases, Section B.:									
Phthisis - - - - -	-	-	-	-	1	-	-	-	1
III. Diseases of the Nervous System and Organs of the Special Senses:									
Apoplexy - - - - -	-	-	-	-	1	1	-	-	2
Sunstroke - - - - -	-	-	-	-	3	-	-	-	3
IV. Diseases of the Circulatory System:									
Disease of the Heart, Organic-Pericarditis - - - - -	1	-	-	1	2	1	1	-	6
VII. Diseases of the Respiratory System:									
Pneumonia - - - - -	-	-	-	-	-	1	-	-	1
VIII. Diseases of the Digestive System:									
Dysentery - - - - -	1	3	-	-	-	1	-	-	5
Diarrhoea - - - - -	1	-	-	-	-	1	1	-	2
Disease of the Liver - - - - -	-	-	-	-	-	1	-	-	1
Wounds and Injuries:									
Wounds and Injuries - - - - -	-	-	-	-	-	-	-	2	2
Burns and Scalds - - - - -	-	1	-	-	-	-	-	-	1
Drowned - - - - -	1	-	2	-	2	-	-	-	5
TOTAL - - -	4	4	3	1	9	5		2	31

TABLE, No. 5. - - - - -
 SHOWING the Number of CASES of all DISEASES and INJURIES - - - - -

DISEASE OR INJURY.	Bullfinch.	Cossack.	Daphne.	Dryad.	Euphrates.
I. General Diseases, Section A :					
Small-pox - - - - -	-	-	-	-	-
Vaccinia - - - - -	-	1	-	-	-
Measles - - - - -	-	-	-	-	2
Enteric Fever - - - - -	-	-	-	-	-
Simple Continued Fever - - - - -	4	-	8	20	55
Ague - - - - -	1	-	-	7	20
Remittent Fever - - - - -	4	52	-	9	20
Cholera - - - - -	-	-	-	1	-
Influenza - - - - -	-	-	-	-	-
Mumps - - - - -	-	-	-	-	-
Erysipelas - - - - -	1	-	-	-	3
II. General Diseases, Section B :					
Rheumatism - - - - -	15	10	10	15	19
Gout - - - - -	1	-	-	-	-
Syphilis { Primary - - - - -	1	7	17	8	9
{ Secondary - - - - -	-	3	4	1	7
Scrofula - - - - -	-	-	-	-	7
Phthisis Pulmonalis - - - - -	3	-	-	-	5
Scurvy - - - - -	-	-	-	-	-
Dropsy - - - - -	-	2	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses :					
Apoplexy - - - - -	-	-	-	-	-
Sunstroke - - - - -	-	3	-	6	3
Paralysis - - - - -	-	-	-	-	-
Vertigo - - - - -	-	-	-	-	-
Epilepsy - - - - -	-	-	1	-	-
Neuralgia - - - - -	-	5	-	1	3
Encephalitis - - - - -	-	-	1	-	-
Diseases of the Eye - - - - -	2	-	2	1	2
Diseases of the Ear - - - - -	-	-	-	5	6
IV. Diseases of the Circulatory System :					
Disease of the { Functional - - - - -	2	1	-	4	-
{ Organic - - - - -	-	1	-	-	5
Varicose Veins - - - - -	-	3	-	1	1
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - - - -	1	4	3	2	4
VII. Diseases of the Respiratory System :					
Catarrh - - - - -	-	12	15	14	5
Hæmoptysis - - - - -	-	-	-	-	-
Asthma - - - - -	-	-	-	-	-
Other Diseases of the Lungs - - - - -	2	1	6	-	3

- - - - - TABLE, No. 5.

- - - - in the Ships employed on the EAST INDIA STATION.

Forté.	Jumna.	Malabar.	Nymphé.	Octavia.	Spiteful.	Star.	TOTAL.
6	3	-	-	2	-	2	13
-	-	-	-	1	-	-	2
-	5	-	-	-	-	-	7
-	7	-	1	-	-	-	8
8	134	18	31	5	1	9	293
5	8	12	2	1	4	12	72
-	10	2	-	-	-	2	99
-	-	1	-	-	-	-	2
-	14	-	-	-	-	-	14
-	-	-	-	-	-	1	1
-	-	1	-	1	-	-	6
39	39	37	7	6	9	17	223
-	-	-	-	-	-	-	1
18	22	6	21	15	7	8	139
10	7	3	3	8	3	-	49
-	-	-	-	-	-	-	7
7	3	3	-	-	-	-	21
-	-	-	1	-	-	1	2
-	-	-	-	-	-	-	2
1	1	-	-	-	-	-	2
6	1	1	-	-	-	-	20
2	-	-	-	-	-	-	2
-	-	1	-	-	-	-	1
1	-	1	1	-	-	2	6
2	6	1	-	1	-	11	30
-	-	-	-	-	-	-	1
4	11	3	4	-	-	7	36
1	7	1	1	-	2	4	27
1	5	2	1	1	-	1	18
4	4	-	-	-	-	-	14
1	-	-	-	-	-	-	6
2	15	5	5	2	5	9	57
50	59	21	12	6	4	39	237
-	1	-	-	-	-	1	2
-	-	-	-	1	-	-	1
-	9	-	-	7	-	1	29

TABLE, No. 5.—Showing the Number of Cases of all Diseases and

DISEASE OR INJURY.	Bullfinch.	Cossack.	Daphne.	Dryad.	Euphrates.
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	3	3	3	1	6
Diseases of the Mouth, Teeth, &c. - -	-	2	-	-	1
Dyspepsia - - - - -	5	12	17	15	28
Dysentery - - - - -	3	1	12	5	-
Diarrhœa - - - - -	20	38	34	11	33
Colic and Constipation - - - - -	3	7	8	6	9
Hæmorrhoids - - - - -	-	5	-	-	-
Hernia - - - - -	-	1	1	-	-
Worms - - - - -	-	1	-	-	-
Other Diseases of the Stomach, Intestines, &c. - -	-	-	1	-	-
Diseases of the Liver, Spleen, &c. - -	-	-	-	2	5
IX. & X. Diseases of the Urinary and Generative Systems :					
Diseases of the Kidneys - - - - -	-	1	1	-	-
Diseases of the Bladder - - - - -	-	1	-	-	-
Gonorrhœa - - - - -	2	10	18	2	4
Diseases of the Organs of Generation -	-	-	-	1	-
Stricture - - - - -	1	1	2	-	4
Varicocele - - - - -	-	-	-	-	-
Orchitis - - - - -	-	2	3	5	3
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones, Joints, &c. - -	-	3	-	1	4
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - - - - -	33	35	36	37	25
Ulcer - - - - -	5	29	38	39	24
Erythema - - - - -	-	1	-	-	1
Diseases of the Skin - - - - -	-	5	-	-	3
Unclassed :					
Debility - - - - -	1	2	4	2	2
Lead Poisoning - - - - -	-	-	-	-	-
Delirium Tremens - - - - -	1	-	2	-	1
Wounds and Injuries :					
Wounds, &c. - - - - -	38	60	63	52	55
Burns and Scalds - - - - -	2	3	2	3	4
Submersion and Drowning - - - - -	-	1	-	2	-
TOTAL - - -	154	329	312	279	391

Injuries in the Ships employed on the East India Station—*continued*.

Forte.	Junna.	Malabar.	Nymphe.	Octavia.	Spiteful.	Star.	Total.
9	11	13	7	11	3	8	78
-	-	2	-	-	1	-	6
46	87	9	2	19	9	28	227
1	30	-	-	-	-	1	53
76	101	39	13	19	14	58	456
8	15	20	2	-	8	5	91
1	6	1	-	2	-	1	16
-	-	-	1	-	-	-	3
1	1	-	-	23	-	-	26
-	-	2	-	-	-	-	3
1	15	9	-	1	3	-	30
-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	1
4	10	2	6	6	3	4	71
-	-	2	-	-	-	-	3
-	2	-	1	-	-	2	13
2	-	-	-	-	-	-	2
3	4	-	3	1	2	3	29
-	-	1	-	-	-	-	9
164	38	18	49	15	47	50	547
39	11	9	14	12	36	30	286
-	1	-	-	2	1	-	6
1	5	3	1	1	3	7	20
17	3	23	8	3	-	11	76
-	1	-	-	-	-	-	1
1	-	-	-	-	-	1	6
103	54	34	51	42	62	79	693
9	9	2	7	1	3	7	52
2	-	-	-	-	-	1	6
65	725	308	255	215	230	423	4,277

TABLE, No. 6.

Showing the Names of the Ships; the Average Complements; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily, in each Ship; and the Number discharged to Hospital.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	Period.	Average Complements.	Average Complements, corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
Fourth -	Forte -	Sheerness -	21 Aug. 1868	24	2,364	S. 400	Year -	570	570	656	7,608	20.8	38.4	13
	Octavia -	Portsmouth	14 June 1865	35	3,161	S. 500	1 Jan. to 31 Mar.	615	150	215	3,060	8.3	55.3	3
Sixth -	Cossack -	Sheerness -	11 Dec. 1868	16	1,296	S. 250	1 July to 31 Dec.	310	155	329	2,952	8.	51.6	9
Sloop -	Daphne -	Devonport -	12 June 1867	4	1,081	S. 300	Year -	165	165	312	4,465	12.2	73.9	8
	Dryad -	Devonport -	3 May 1867	4	1,086	S. 300	Year -	165	165	279	2,709	7.4	44.8	5
	Nymphe -	Woolwich -	13 June 1867	4	1,084	S. 300	Year -	170	170	255	3,274	8.9	52.3	4
	Spitfal -	Woolwich -	2 Nov. 1865	6	1,084	P. 280	1 Jan. to 30 June	180	90	230	2,078	5.6	62.2	-
Gun Vessel -	Bullfinch -	Sheerness -	15 Oct. 1868	3	664	S. 160	1 April to 31 Dec.	95	70	154	1,389	3.8	54.2	2
	Star -	Devonport -	14 Oct. 1866	4	695	S. 200	Year -	110	110	423	3,464	9.4	85.4	4
Troop Ship -	Euphrates -	-	- Mar. 1867	3	4,173	S. 700	Year -	200	200	391	3,487	9.5	47.5	5
	Junna -	-	- Mar. 1867	3	4,173	S. 700	Year -	255	255	725	6,345	17.3	67.8	5
	Malabar -	-	- Mar. 1867	3	4,173	S. 700	Year -	200	200	308	2,888	7.9	39.5	2

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TABLE, No. 6.

Showing the Names of the Ships; the Average Complements; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily, in each Ship; and the Number discharged to Hospital.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	Period.	Average Complements.	Average Complements, corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
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	Dryad -	Devonport -	3 May 1867	4	1,086	S. 300	Year -	165	165	279	2,709	7.4	44.8	5
	Nymphe -	Woolwich -	13 June 1867	4	1,084	S. 300	Year -	170	170	255	3,274	8.9	52.3	4
	Spiteful -	Woolwich -	2 Nov. 1865	6	1,054	P. 280	1 Jan. to 30 June	180	90	230	2,078	5.6	62.2	-
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	Star -	Devonport -	14 Oct. 1866	4	696	S. 200	Year -	110	110	423	3,464	9.4	85.4	4
Troop Ship -	Eufrates -	-	- Mar. 1867	3	4,173	S. 700	Year -	200	200	391	3,487	9.5	47.5	5
	Junna -	-	- Mar. 1867	3	4,173	S. 700	Year -	255	255	725	6,345	17.3	67.8	5
	Malabar -	-	- Mar. 1867	3	4,173	S. 700	Year -	200	200	308	2,888	7.9	39.5	2

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THE squadron on the China Station in 1869 comprised twenty-three vessels; viz., one iron-clad; one second rate; one sixth rate; five sloops; nine gun vessels; two steam vessels; two surveying vessels; one troop ship; and one receiving ship permanently stationed at Hong Kong; besides these, there were eight small gunboats, from which the returns are defective. The returns from sixteen of the vessels are for the whole year, and from the remainder for periods varying from three to nine months. The total force corrected for time was 3,750; but in estimating the ratio of cases entered on the sick-list it is necessary to make a deduction from the force equal to the crews of the small gunboats, from which the returns were defective, and for this purpose therefore the force will be considered as 3,480; the total force, however, is taken for the invaliding and death rates, the returns under those heads being complete. The total number of cases of disease and injury entered on the sick-list was 5,242, which is in the ratio of 1,506·3 per 1,000 of force, being a reduction, compared with the preceding year, equal to 86 per 1,000. Of these, 188 were invalided, and fifty-one proved fatal, the former being in the ratio of 50·1, and the latter of 13·6 per 1,000. Compared with 1868, there was a reduction in the invaliding rate to the extent of 15 per 1,000, and an increase in the ratio of mortality equal to 6 per 1,000.

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The average daily number sick from General Diseases, Section A., or Febrile Group, was in the ratio of 4·7 per 1,000; and from Section B., or Constitutional Group, 17·1; from diseases of the nervous system and organs of the special senses, 1·1; of the circulatory system, 3; of the absorbent system and ductless glands, 2·4; of the respiratory system, 2·6; of the digestive system, 5·3; of the urinary and generative systems, 4·4; of the organs of locomotion, 5; of the cellular tissue, and cutaneous system, 12; from unclassified diseases, 1·3; and from wounds and injuries of various kinds, 6·7. The average number of men sick daily was 231·4, which is in the ratio of 61·7 per 1,000 of force, being an increase, compared with the preceding year, equal to 3·8 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

Under this head 505 cases of various forms of disease were entered on the sick-list, viz., forty of small-pox; nine of typhus fever; two of enteric fever; 315 of simple continued fever; seventy-seven of
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ague; fifty-two of remittent fever; six of mumps; and four of erysipelas. Of these, three of simple continued fever; eight of ague; and six of remittent fever, were invalided; and four of small-pox; one of typhus fever; one of enteric fever; one of simple continued fever; one of ague; and one of remittent fever proved fatal.

Small-Pox.—Forty cases of this form of eruptive fever were under treatment, of which four terminated fatally. The average duration of each case on board ship and in hospital was between nineteen and twenty days. The vessels in which the disease made its appearance were the *Icarus*, the *Leven*, the *Salamis*, and the *Zebra*.

There were eleven cases of small-pox in the *Icarus*. They occurred in the month of November, at Shanghai. Two of them proved fatal, but the rest were modified in character. They were all at once removed to the General Hospital on shore. The medical officer* says: "The disease first made its appearance in the person of a Marine who had been on duty on shore as orderly, and was turned over to this ship from Her Majesty's ship *Zebra*, previous to her departure for Japan; and I am rather inclined to think that it was from her that the disease was contracted. All the cases presented the same symptoms—rigors, pain in the head and loins, nausea, and rapid pulse. In all the cases marks of vaccination were borne. The average period of the primary fever was two days, and as a rule the eruption appeared on the face. As regards the precautionary measures taken against this epidemic, leave was stopped for some time; all the holds and lockers fore and aft in the ship cleared, thoroughly cleansed, whitewashed, and chloride of zinc and carbolic acid freely used. The ship's company were all mustered for inspection of their vaccination marks. Any doubtful ones I re-vaccinated, but in only one or two cases was it successful. Up to the close of this journal there were no signs of any more cases. The disease has been very prevalent on shore during this winter, especially among the natives, so much so that Europeans have been cautioned and warned from going into the native town." In the two fatal cases, although both bore vaccination cicatrices, in one they were not satisfactory. In the other, however, not only were the marks good, but he had been successfully re-vaccinated subsequent to his entry in the service. In this case there must have been a singular proneness to the disease.

There were four cases of small-pox in the *Leven*, one of which proved fatal. The returns from this vessel are imperfect, and no information has been obtained in connection with these cases.

In the *Salamis* there was a single case of small-pox. It occurred in the month of December at Foochow, and was very modified. Whether the man had been previously vaccinated or not, is not stated.

There

* Acting Surgeon C. Gregory Wodsworth.

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There were twenty-four cases of small-pox in the Zebra. Of these, one, a single isolated case, occurred in the month of June at Shanghai, in the person of a Marine. He had good vaccination cicatrix on each arm; the case proved mild and recovery rapid. No other case appeared until the month of November, when on the evening of the day the vessel left Shanghai for Japan (2nd of November), one of the crew was found suffering from headache, and lumbar pains, with febrile disturbance and nausea; there was slight drowsiness, and the skin was hot and dry; there were no rigors. He was at once separated from the rest of the ship's company. The medical officer* of the ship says: "I may as well mention here that he, as well as each of the other cases subsequently attacked, had a fair vaccine cicatrix on the arm. Next morning a papular eruption appeared upon the forehead, soon becoming pustular, and extending over the face, arms, and chest. A second man showed premonitory symptoms on the evening of the 5th, and another on the 8th. These three cases proved to be of the confluent form of the disease. I ascertained that these men had, when on leave at Shanghai, on the 21st, 24th, and 27th of October, frequented a low brothel in the American Settlement (Hong-que). They denied all knowledge of there having been any sick persons in the place, though this is the only origin to which I could trace the disease. Three milder cases occurred on the 9th, 14th, and 15th. These last men had also been on shore at Shanghai, when special leave had been given in October, and general leave on the 23rd of that month. On the vessel arriving at Kóbé, Hiogo, I sent the above six cases of variola to the temporary sick quarters at that port, and they were all doing well on the 16th of November, when the Zebra proceeded to Yokohama, arriving there on the night of the 18th, by which time no less than fourteen additional cases had appeared. As soon as proper accommodation had been prepared on shore, they were sent to the hospital, as also a mild case which appeared on the 21st. The disease decreased in intensity from the first outbreak. All possible precautions were taken to prevent the extension of the contagion. There was one case from the gunroom, one only from a Marine mess, and the remainder from the seamen's messes in average proportion."

Typhus Fever.—There were nine cases of this serious form of fever, of which one proved fatal. Each case was, on an average, between twenty-six and twenty-seven days under treatment.

In the *Argus* there were two cases of typhus fever. They occurred during the Lady quarter of the year, and the disease was contracted at Yokohama, where general leave was given. No information of any value is given in connection with them.

There was a single case of what is classed as typhus fever in the *Icarus*. It appears, however, to have been more of the enteric character. It occurred at Yokohama, in the Lady quarter of the year, in the person of an officer who had been ailing for some days before he

* Surgeon J. W. Leahy.

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he presented himself for treatment, fancying that he had merely caught a cold. In this case the symptoms were of much severity; delirium and hiccough set in early, and a dark eruption presented itself over the chest and abdomen. He was discharged to the Naval Hospital at Yokohama where he made a good recovery. The medical officer* of the ship says:—"From the colour of the rash, and the early period at which delirium set in, I have entered this as a case of typhus fever, although it is only right to add that after his admission to hospital there was irritability of the bowels and troublesome diarrhœa; but this does not shake my opinion, as the enteric symptoms may have been the result of purgatives which were given, and not of specific origin. He was sent to sick quarters on the forenoon of the 24th of March, his bedding and gear being sent with him; the cabin scrubbed out and sprinkled with chloride of zinc, the scuttle kept out, and no one allowed to occupy it for some time."

The medical officer† in charge of sick quarters at Yokohama reports the case as one of enteric fever, and says that the rose-coloured eruption was well marked, and appeared in several crops.

There were six cases of typhus fever in the Ocean, one of which proved fatal. The following report in connection with these cases is by the surgeon‡ of the vessel:—"Typhus fever, which had been prevalent on shore, both in the foreign settlement and amongst the native population, as is usual during the early months of the year in this place, first appeared in this ship while she was lying at the anchorage inside the island of Oosima, situated almost at the entrance of the Kii Channel, and during her stay of three days there, on her passage to Hiogo, in the inland sea of Japan. Save some of the officers who landed for sporting purposes, none of the ship's company were allowed to go on shore, as the anchorage is situated far outside all treaty limits. The first case, a healthy young ordinary seaman who had been on general leave about twelve or fourteen days previous to the ship's departure from Yokohama, and had passed the night in a native house, was placed on the sick-list on the 10th of March complaining of flying pains about both upper extremities, especially troublesome in the left elbow-joint, sore-throat accompanied with difficult deglutition, and, vertigo, which had existed more or less for the last three months, coming on early in the morning when he first turns out, lasting for about fifteen minutes, and then disappearing for the rest of the day; no loss of appetite; pulse 80, full; bowels regular; no thirst. For these symptoms, pulv. ipecac. ʒj, followed by a purge of calomel and jalap, was given, and sinapisms applied to the elbow-joint and throat, and he was placed in bed. On the 11th the throat symptoms had disappeared; the pain had shifted from the elbow to the shoulder-joint, the pulse was quick, 90, and bounding; the tongue covered with a thick creamy coat, with papillæ projecting through; conjunctivæ injected; skin burning hot, and persistency of the vertigo,

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* Surgeon R. J. M. Morris, † Surgeon John Dunwoodie.
‡ Surgeon John Rorie.

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so that he was unable to sit up. He complained of great thirst and sleeplessness. On the 14th a diffused rubeoloid rash made its appearance on the abdomen, chest, back, and upper extremities, but in a few hours faded, leaving the general surface thickly speckled with dusky purple petechial spots. Difficulty of swallowing returned; deafness came on; a short, troublesome cough set in; the tongue became dry and parched, slight subsultus tendinum; increase of the stupor, with frequent and incoherent mutterings, constipation, retention of urine, hot scalp, and head and neck suffused with a vivid coppery blush. On the 18th advantage was taken of an hospital which had been erected near the seashore, for the admission of small-pox cases, to land this man; at the same time, a stoker, who had been placed on the sick-list on the 14th of March, in a cachectic condition, from the presence of constitutional syphilis, and complaining of catarrhal symptoms, with oedema of the lower extremities, but who was also evidently infected with the typhus poison, and also a seaman evidently in the same condition, and an assistant paymaster, were removed on shore, an assistant surgeon of the ship placed in charge, and nurses appointed. In the case of the stoker, the eruption, very scanty however, appeared on the 19th, five days after his admission on the sick-list. In the third case admitted, which proved fatal, it appeared two days afterwards, and was very copious; and, in the fourth, the assistant paymaster, who was placed on the sick-list on the 17th, it was observed on the 21st, was not very distinct in character, and almost looked like a miliary eruption. After this date no more cases occurred until after the return of the ship, on the 2nd of April to Yokohama when, on the 22nd of that month, one of the men who had nursed the first patient was placed on the sick-list, and on the 25th discharged to the Naval Hospital, the eruption having appeared on the previous night; and, on the 23rd, the sixth and last case was placed on the sick-list, and discharged also on the 25th to hospital. The first man seized, it is supposed, conveyed the infection on board, as three out of the remaining five had not been on shore for weeks, and two had only been on leave for a few hours, had only entered a European grog-shop where they had spent about an hour drinking, and then returned to the ship between 9h. and 10h. p.m. The only two men in the same mess were the first man and his nurse.

“Early and extreme prostration of strength, deafness, muscular pains, with disturbance of the mental functions, and cough, occurred in all. Only in one case did the delirium become violent, and general convulsions occur, and that was in the fatal case, and then only for about twenty-four hours before death. The crisis occurred about the fifteenth day, and then all made a rapid recovery without any untoward symptom, saving the stoker, who, as has been previously stated, was suffering from syphilitic cachexia when symptoms of typhus infection declared themselves. He required a prolonged administration of iron, cod liver oil, and iodide of potassium to fit him for duty. All have been extremely healthy since.

“Immediately the character of the disease was observed in the ship the patients were placed in separate screened places on the main deck, and all the necessary and known precautions taken to prevent

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the extension of the infection, and after they were landed on the 18th of March, they were placed in rooms with the windows wide open, and left so with fires constantly burning day and night; were well covered with warm clothing, as chilly days occasionally occurred, and active, healthy, intelligent trustworthy nurses appointed. Carbolic acid was kept constantly in the urinary and faecal utensils; the discharges removed as soon as passed; extreme cleanliness of the persons of the sick obtained by daily ablution with soap and warm water: carbolic acid frequently sprinkled about the floors and on the bedding, and an improved and most nourishing diet supplied to the attendants who, I feel, by their care and complete attention to the orders given by the medical officers, contributed most importantly to the fortunate results obtained.

"The treatment consisted in the administration of an emetic followed by a purge, and then effervescing salines; shaving the head, and applying cold lotion to moderate cerebral excitement; sinapisms to the chest when pulmonary symptoms appeared; constant attention to the state of the bladder; enemata of soap and water if the bowels were not relieved daily; hot-water bottles when the temperature of the lower extremities fell, as it did occasionally; and an application, when necessary, of a strong solution of camphor in alcohol to the integuments over the sacrum and trochanters. For a diet: milk, egg-flip, strong beef tea, and rice stewed in it; wine, brandy, &c., increased or diminished in quantity according to the volume and rapidity of the pulse, in general a fair indicator of the patient's condition and requirements in this disease."

Enteric Fever.—Two cases only of this form of fever appear in the returns from the squadron, and their severity may in some measure be estimated by the fact that the average duration of each case on board ship and in hospital was over 171 days. Both cases occurred in the Ocean.

On Table IV., a fatal case of this disease appears in connection with the *Rodney*. It occurred in the person of a leading seaman, who was placed on the sick-list on the 19th of December 1868, complaining of diarrhoea. He was a man of very meagre frame and delicate physique. Under the treatment to which he was subjected he appeared to do well for a time, but low symptoms set in; the tongue became dry and brown; small rose-coloured papulae appeared on the trunk; the stools were composed of thin reddish faeculence; and the vital powers were much prostrated.

On the 4th of January 1869, he was sent to the general hospital at Shanghai. On the 9th, the disease became much aggravated, and on the 10th, he died.

Simple Continued Fever.—There were 315 cases of this form of fever under treatment during the year, of which three were invalided and one proved fatal. The average duration of each case on board ship and in hospital was about thirteen days. The vessels in which the largest number of cases occurred were the *Avon*, the *Princess Charlotte*, the *Rodney*, and the *Zebra*.

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In the Avon there were twenty-six cases of this form of fever; of these twenty-two were contracted during the months of May, June, and July, either at Labuan or Balabac. They were considered, in all cases, to be attributable to the same causes; viz., exposure to the heat of the sun, and wet. The symptoms were almost precisely identical in each case, and were characterised by intense headache, vomiting, flushed face, increased temperature, and accelerated pulse.

In the Princess Charlotte there were fifty-five cases of simple continued fever. They appear to have been for the most part of a very trivial character; but very little information is given in connection with them.

There were 134 cases of simple continued fever in the Rodney, concerning which the staff surgeon* observes:—"The majority occurred in the Michaelmas and Midsummer quarters, seventy-three in the former and twenty-nine in the latter. Those contracted in the months of July and August, when the ship was lying at Yokohama, and during the passage to Hong Kong, were purely of an ephemeral character, and yielded quickly to laxatives and diaphoretics; but in September, at Hong Kong, and subsequently, partly owing to the climate, but more to the number of worn-out men drafted into the Rodney from ships paid out of commission on the station, the symptoms assumed a mixed character, in some resembling those of ague, in others those of remittent fever, and were frequently followed by great prostration of physical and mental powers."

... "Three cases, the subjects being men paid off from the Starling, which had been employed on the coast of Borneo, were, in particular, of such a mixed character that it was difficult to class them, assuming, at the commencement of the attack, the continued type, and that of the remittent towards the close. They yielded to mercurial purgatives, diaphoretics, and quinine. One case, occurring in the person of a man who had been previously treated on the sick-list for catarrh and rheumatic pains of a syphilitic character, and whose constitutional powers were comparatively broken down, quickly assumed a very low form, accompanied by daily progressive emaciation; furred, dry, brown tongue; harsh skin, and great prostration. He was sent to Yokohama sick quarters, and there left on the sailing of the ship for England, his state being such as was likely to prove fatal during the voyage. Another case, placed on the sick-list at Nagasaki on the 1st of April, proved very tedious, from relapses on the slightest exposure to cold. His symptoms at the first were of a highly febrile nature, marked by great heat of skin, quick pulse, throbbing of temples, and furred tongue. These yielded in about six days to the action of purgatives and diaphoretics, the crisis being marked by profuse sweating, followed by debility. As above mentioned, on the slightest exposure relapses occurred, the symptoms of which gradually assumed a modified form under the influence of quinine."

In

* Staff Surgeon George Birnie Hill.

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In the Zebra there were thirty-one cases of simple continued fever⁷ mostly of an ephemeral character. They occurred principally during the summer; the common symptoms were headache, accelerated pulse, anorexia, dark furred tongue, and rigors occurring at irregular intervals. There were no marked intermissions.

The fatal case of simple continued fever occurred in the person of an officer's servant of the Perseus, a delicate-looking youth of spare build, who had recently joined the ship. The case, as may be judged by its termination, was of great severity; presenting, in many respects, the characteristic symptoms of true typhus.

Ague and Remittent Fever.—Seventy-seven cases of ague and fifty-two of remittent fever were entered on the sick-list, and there was one death from each form of disease. The fatal cases occurred in small gun-boats, and no information has been obtained in connection with them.

The Avon, the Elk, and the Rifleman were the vessels in which the largest number of cases of these fevers appeared, and in all they were attributable to exposure to malarious influences, while the vessels were employed among the islands of the East Indian Archipelago. The average duration of each case of ague was a little over ten days, and of each case of remittent fever fourteen days.

Mumps.—Of six cases of this painful affection five occurred in the Ocean. The surgeon says:—"The disease, which was of the simple form, appeared in the last week of May, and continued during the month of June, the last case being placed on the sick-list on the 22nd of that month. Three of the patients were nineteen years of age, one twenty-seven, and the other thirty-three. It occurred 'sporadically,' from cold conjoined with humidity, for in this month, generally, the hot, rainy season of Japan sets in; but this year the temperature was much below the usually observed height, and northerly instead of south-westerly had been the prevailing winds for some weeks. Both parotid glands were affected; in one case the sub-maxillary also; in another, metastasis occurred to the testes. The symptomatic fever was slight, and suppuration did not occur."

II. General Diseases, Section B., or Constitutional Group.

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Seven hundred and eighty-six cases of various forms of disease were entered on the sick-list under this head, of which fifty-nine were invalided and eight terminated fatally. Seven of the deaths were from pulmonary consumption.

Rheumatism.—Of this troublesome disease 252 cases were placed on the sick-list, which is in the ratio of 72.4 per 1,000 of force. This is a reduction, compared with the preceding year, equal to 11.7 per 1,000.

In the Rodney, in which there were fifty-one cases of rheumatism, the staff surgeon observes:—"The majority of cases of this disease occurred

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occurred in the Lady and spring quarters, during which the greatest alternations of temperature were experienced. Of the fifty-one entered, only five or six were of the acute character; the remainder comprised those suffering from lumbago and temporary pains of a rheumatic character, affecting the joints and other portions of the body. The greater number were primary attacks; but six appear on the list several times, some on three, others on four occasions. Of the eleven sent to hospital, two were ultimately invalidated; one of them, whose symptoms were of a syphilitic character, and another who suffered from arthritis and effusion into the right knee joint, were surveyed at Hong Kong, and return in their ship to England.

"In one case, that of a petty officer, a thin, spare, wiry man, the disease resulted from gonorrhoea, and proved very intractable; the pain, of a sub-acute nature, was confined on the first occasion to the bones and tendinous structures of the inside of the left foot, and was accompanied by little swelling; but on the second occasion, a month subsequently, the wrists, knees, and both ankles were implicated; his general health was also impaired, and he looked thin and emaciated. On his first entry on the list, alkalies, colchicum, and blisters proved successful in eighteen days; but, in the second attack, those means, combined with tonics, gave no relief, and he was sent to Hong Kong Hospital on the 2nd of September, with a hope that he might be brought forward for survey; but to this he strongly objected, and, as the ship was going home, his whim was gratified. He returned to the ship on the 22nd of the same month, his symptoms having undergone little alteration. He still remains on the list, and is slowly improving under the use of ferruginous tonics, nourishment, and stimulants, and I think ere long he may be discharged to duty.

"In all the acute cases the heart was unaffected; but the febrile symptoms were severe, accompanied as usual with sour perspiration, and urine of high specific gravity, loaded with lithates and urates.

"The treatment adopted consisted in clearing out the primæ viæ, followed by a scruple of Dover's powder, the exhibition of large doses of some of the salts of potash, generally the acetate, either alone or combined with mindererus spirit, or the nitrate, with tinct. colch., continued until an alkaline effect was produced on the urine. Circular blisters, followed by large emollient cataplasms, were invariably attended by the most beneficial results, even when no internal medicines were used. Metastases were of frequent occurrence after the use of blistering, and were generally a sure indication that the disease was about to subside.

"In two cases subsequent debility proved of a lingering and tedious nature, requiring the offices of the cook rather than of the medical man."

Syphilis, Primary and Secondary.—There were 318 cases of primary syphilis, and 165 of secondary syphilis on the sick-list during the year, and of these, three of primary and twenty of secondary syphilis were invalidated. The duration of each case of the former disease was thirty-nine days, and of each case of the latter, a little over thirty-five days. About fifty men were, on an average, daily incapacitated for service from these diseases alone.

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The vessels in which syphilitic diseases were most numerous, were the Ocean, the Pearl, the Rodney, and the Princess Charlotte.

In the Ocean there were seventy cases of primary syphilis, and forty-seven of secondary. The surgeon, speaking of these two forms of disease, remarks that "In addition to six cases remaining under treatment from last Annual Report, 117 new ones were added to the sick-list, almost all of whom were infected in Japan, principally at Yokohama, and thirty-two were discharged for hospital treatment. This does not include an almost equal number who were treated as out-patients for simple uncomplicated soft sores on the genitals. This was an increase of nineteen over the total number of the year 1868, but then it must be remembered that no leave had been given to the ship's company in its first quarter, whilst the ship was stationed at the then newly opened port of Hiogo. Undoubtedly the appointment of a medical officer for special service, in connection with the Lock Hospital, at Yokohama, the headquarters of the Japan squadron, must have tended to mitigate the ravages of this fell disorder amongst the officers and men of the Navy employed on this part of the station; but despite all the precautions adopted, much yet remains to be done ere the port can be declared even moderately free from infection. As it is, I consider it now, after having been for many months under supervision, the most infected, and exhibiting the worst form of the disease I have yet seen in the East. The ship's company have been carefully examined on board, previous to the monthly leave giving. A separate list of those suffering from gonorrhœa is kept for police purposes, and the men whose names appear on it are not allowed to visit the shore till cured. Every infected patient on presenting himself for treatment is questioned, and on affirming his knowledge of the locality, and woman with whom he had associated, is immediately sent to the Yoshiwarra (the public bagnio) in charge of a ship's corporal, to point her out, that she may be immediately placed under observation and treatment.

The "sores" were of the three usually described forms, the one that is soft throughout its whole course chiefly prevailing, and were situated in all parts of the penis, both externally and internally, but principally in the cervix or fossa. The inguinal glands on one or both sides were frequently involved, and they generally suppurred. As a rule, the sores were seen at too late a period for the successful use of escharotics. Calomel dusted on the sores, with an after-dressing of dry lint once in the twenty-four hours, was found the most successful local application; and if the sore proved a little obstinate, it was coaxed into a good condition by the administration, thrice daily, for seventy-two hours, never longer, of a powder composed of pulv. doveri gr. v., hydrarg. c. creta, gr. ij. Suppurating buboes were treated by the carbolic acid plan of opening and dressing, by the seton, and by free incision, and with about equal success.

The constitutional manifestations followed at most uncertain intervals of time, and were almost of every known variety, affecting the various viscera, giving rise to epilepsy, paralysis, tuberculosis, ultimately

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ultimately terminating in phthisis. Cachexia was not at all uncommon, and was most intractable, requiring months of hospital treatment, and occasionally leading to invaliding. Psoriasis was the most common of the eruptive forms. The most useful remedy in such cases was found to be the following draught, given thrice daily, with a full and nourishing diet, Liq. hydrarg. bichlor. ʒj., potass. iodid., gr. v., tr. opii. min. v., aquæ ʒiss. Ulcers on the trunk or extremities soon got well under the daily application of unguentum calomelanos."

In the Pearl there were twenty-three cases of primary and twenty-nine of secondary syphilis. With regard to the prevalence of syphilis at Yokohama, the medical officer* observes, "I do not think that this disease is so virulent as heretofore, nor are the cases so numerous. Since the system of examination of the prostitutes has been organised, many women, who otherwise would have contaminated the community, are now confined to the Lock Hospital, and are kept there till cured.

"The regular prostitutes are all under the care of the Japanese Government, and are obliged to live in a particular portion of the town, surrounded by deep ditches, and only accessible by boats, or by a bridge. When these unfortunates wish to go outside to visit their friends, they are provided with a 'fuda' or pass, which consists of a small piece of wood, on which is written the name of the woman, and the number of the house she is going to visit. The average number of women in this public brothel during the last year was 1,020, and each woman was examined once a week.

"In addition to these regular women, the owners of low grog-shops, and cafés have, up to this time, harboured girls to tempt the half-drunken soldier or sailor. When few men were on leave, they prowled about the streets of the settlement, soliciting the passers-by.

"Dr. Newton, R. N., to whom I am indebted for the foregoing information, has at last persuaded the local authorities to put a stop to this vagrant prostitution, and now any woman who is found wandering about the streets at night without a fuda, is arrested and sent to the Lock Hospital for examination. The beneficial result of this proceeding was proved by the discovery of twenty diseased women, out of forty arrests, in one night only. From this time we may expect a considerable decrease in the number of cases."

In the Rodney there were eighty-four cases of primary and fourteen of secondary syphilis, in reference to which the staff surgeon observes, "There were eighty-seven cases of primary syphilis treated during the period, of which three remained from the preceding year. Sixty-nine were discharged to duty, fourteen sent to hospital, and four are still under treatment. Nine contracted the disease at Shanghai towards the end of last year and the beginning of January; twenty-eight at Nagasaki, in February and March; one at Kobé, in April; twenty-two at Yokohama, in June and July;

* Acting-Surgeon Bradley Gregory.

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July; eight at Hong Kong, in September; and twelve at Singapore, in November. Of those contracted at Shanghai, three proved hospital patients, and were discharged to Melville; one resulted in extensive phagedena; one was followed by suppurating bubo; and in the third numerous hard, horny chancres were seated around the corona, and bathed in fetid pus from a phymosed state of prepuce. In none of these did secondary symptoms make their appearance.

"During the time the ship was anchored at Hong Kong, general leave was given, and the result, as judged by the admission of only eight cases of syphilis on the sick-list in such a large vessel as the *Rodney*, speaks well for the surveillance exercised over prostitution in this place. The character of the sores was also very different from that observed in the northern part of China or Japan, partaking more of the nature of superficial abrasions than that of specific ulcers.

"Nagasaki forms an unfavourable contrast in this respect when compared with Hong Kong as above-mentioned. No sanitary measures have as yet been instituted to stop the ravages of the social evil. As the sources of infection are numerous from the crews of foreign ships, and as no remedial measures, or at least very imperfect ones, are adopted by the native doctors, the disease is seen here in all its varied forms, and its spread is daily increasing. Could compulsory supervision be adopted here, as at Yokohama and other places, I need not remark how great the benefits would be to all classes. Of the twenty-eight cases recorded as contracted at this port, four were followed by suppurating bubo; two were of a sloughing nature; and one sent to hospital at Yokohama was of a phagedenic character. The subject of the latter was a seaman, aged 38, a man prematurely old, and whose constitution was broken down by intemperate habits. About three weeks after infection, he presented himself with a soft, circular, sloughing syphilitic ulcer, situated on the left side of the body of the penis. Notwithstanding the measures adopted, the sore spread to such an extent that he was obliged to be sent to the hospital at Yokohama, fearing that the character of the sore might taint ulcers in its vicinity, although strict segregation was observed. His case began to improve in about ten days after admission to sick quarters, and quickly healed. But secondary symptoms, in the form of an extensive roseolar eruption, soon appeared on the chest, arms, and legs, and ultimately yielded to the use of mercury and iodide of potassium. The primary sore was of such a nature as to preclude the use of mercury, and hence, in my opinion, the occurrence of constitutional effects.

"In the majority of these cases the sores were of a soft, superficial, spreading nature, free from hardness or surrounding interstitial deposition, and amenable to mercurial fumigation, the internal use of this mineral carried to slight ptyalism, and the local application in the first place of escharotics, as acid. nitric. fort., followed by black wash, sol. cupri. sulph., or some other astringent and stimulating application.

"The character of the sores was no doubt altered or modified in accordance with the constitution of the patients, or by the number of
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of prior attacks; those affected for the first time having sores possessed of a more specific character than those who had previously experienced the disease.

"A great deal has been said and written of late as to the treatment of the various kinds of syphilis, and therefore I feel very diffident in hazarding a remark on this point, where so many different opinions prevail, but I am perfectly convinced, in my own mind, that all suspicious sores should be attacked by gentle mercurialism of considerable duration, as being the only means of preventing the occurrence of constitutional symptoms. Where this system has been properly carried out and followed up by the use of iodide of potash and decoction of sarsaparilla, the cases in my own experience are very rare in which secondaries occurred.

"The character of the disease at Yokohama was much milder than on the former occasion when the ship visited this port. Only four cases proved tedious under treatment on account of the occurrence of suppurating bubo. One of these was subsequently invalided at Hong Kong for syphilitic cachexia, associated with a livid coloured eruption.

"Those contracted at Hong Kong were, as on a former occasion, of a simple nature; but, from being frequently accompanied by gonorrhœa, the discharge of which acted as a poison to the sores, their cure was in some instances rendered tedious.

"The majority of the cases inspected at Singapore were of a phagedenic and sloughing character, and did not in general make their appearance for three or four weeks after intercourse; the subject of the worst of these was a Marine whose general health was much debilitated; on presenting himself the ulceration had embraced the whole of the superior surface of the glans, and was rapidly spreading. By improving the patient's weakened state by tonics, stimulants, and nourishing diet, and by the topical application of strong nitric acid, followed by mercurial fumigation, the parts rapidly healed, and he was discharged to duty in twenty-four days.

"Of those remaining under treatment, one is likely to prove tedious. The subject of the disease is an officer, a robust, clear, florid complexioned young man, of a scrofulous diathesis. He entered the list on the 7th of December with a superficial sloughing ulcer about the size of a sixpence, situated on the corona glandis, accompanied with bubo and gonorrhœa. By the free application of strong nitric acid, and the internal use of mineral acids, followed subsequently by gentle ptyalism and fumigation, the sore healed and the swelling of the glands of the groin disappeared. He was about to be discharged from the sick-list when a small sore made its appearance in the urethra, about half an inch from the orifice; this at present has a very unhealthy appearance, and, situated as it is, the urine irritates it, and I am afraid it may ultimately prove serious.

"Of the fourteen cases of secondary syphilis, nine were primary entries, and three were remissions; one of the latter appears three times, another twice, and a third three times. The first on the list was a petty officer sent to hospital for sloughing sores, in the end of last year; his primary disease did not admit of the use of mercury, and in March he was attacked with rheumatism, and a copious

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copper coloured eruption, which yielded to the use of iodide of mercury and iodide of potass.

" One patient, an able-seaman, by his own statement had not had primary syphilis for years, only an attack of gonorrhœa. In this case there was a thick pustular eruption over the chest and extremities, and ultimately the face, which was ushered in by some febrile symptoms, and his general health was impaired. He was discharged to sick quarters at Yokohama, and rejoined on the 24th of July, on the ship being ordered home; he was now treated with tonics of quinine and iron, under which he improved very much, but on the ship reaching Hong Kong he was temporarily sent to the Melville Hospital Ship, where he remained during the refitting of the Rodney until her departure on the 23rd of September from the station, when he was again admitted on the list for two days.

" A gunner of the Royal Marine Artillery, lately paid off from the Icarus, proved a subject for invaliding. His general health was much impaired from syphilitic cachexia; a copious papular eruption covered the chest and extremities; the lower limbs were much swollen and œdematous, and there was persistent ophthalmia, accompanied by slight iritis on the right side. He is now an invalid on board.

" Another Marine, late of the Cormorant, paid off, suffered from an extensive eruption of rupia on both legs and feet, which from time to time took an ulcerative action, accompanied by œdema; he was pale and cachectic, and had suffered from primary disease about four years previously; he improved under tonics and nourishing diet, followed by iod. potass. in small doses, but he is still under treatment.

" One case, received from the Princess Charlotte, and lately employed in the Marine Guard on board the Melville, was affected with an eczematous ulceration of a very troublesome and persistent nature, situated around the feet and ankles. Another belonging to the Rodney had impetigo of the legs, the sequel of a recent attack of primary disease; the remainder mostly comprised rheumatic affections which, from their histories, were considered syphilitic, and were treated accordingly."

In the Princess Charlotte, in which there were seventeen cases of primary and twelve of secondary syphilis, the majority of the primary cases were examples of the simple soft sore or chancroid, most of them followed by bubo, which usually suppurated, and was the cause of their long detention on the sick-list. The cases of secondary syphilis were mostly of long standing, the primary disease, it is said, having usually been contracted in England.

There were eight cases of primary and eleven of secondary syphilis in the Cormorant, all attributable to infection in Japan. With reference to some of these cases the medical officer* observes:—" Primary syphilis has of late much diminished in Yokohama since the institution of the Lock Hospital, and the inspection of women in that

* Assistant Surgeon Charles L. Ridout.

that place, as well as the strenuous exertions that have from time to time been made to suppress vagrant prostitution. The cases that presented themselves were not of so severe a nature as formerly, being much more amenable to treatment. One case out of three was followed by constitutional symptoms, but all were accompanied by suppurating buboes. One of the most effectual methods of treatment of chancres, especially when accompanied by hardness, is found to be that of fumigating the part affected with calomel vapour (gr. xv.) once a day, and the speedy healing of the sores was sometimes quite surprising. Chloride of zinc lotion made by adding one drachm of Sir William Burnett's disinfecting fluid to sixteen ounces of water, acts extremely well when the sore is entirely soft.

"The cases of secondary syphilis were examples of long standing disease in broken-down constitutions, usually of a severe type, consisting of obstinate ulceration, nodes, and rheumatic pains. Iodide of potassium combined with generous diet, cod liver oil, quinine, iron, and port wine was the treatment usually adopted. On this station, I have often observed that syphilis runs a particularly rapid course, passing in a short time to advanced stages. This is probably caused by the depressing nature of the climate, which renders the system less able to withstand the effects of the poison."

Purpura.—Two cases of this disease in a mild form were entered on the sick-list, and both were discharged to duty. In Table IV., however, a fatal case appears in connection with the Ocean. It occurred in the person of a petty officer who was sent to Yokohama Hospital as a case of dyspepsia, but in whom spots of purpura had made their appearance on the legs. On admission to hospital he is reported to have been a man of large frame, but much reduced in flesh and strength. He complained of debility, dyspnoea, cough, loss of appetite, and a constant sinking feeling; the skin was sallow, dry, and dusky; the conjunctivæ tinged yellow; the tongue coated with a deep yellowish fur, and the pulse 76. On the lower extremities, and on other parts of the body there was an eruption of purpura; there was considerable difficulty of breathing, slight dullness on percussion over the whole chest, and the respiratory murmur was indistinct, but there was no crepitation. He stated that he had been for the most of his life in the merchant service, on hot stations, and particularly on the Coast of Africa.

His symptoms gradually increased in severity, the ankles became œdematous; several large "blotches" of purpura appeared on the feet; those on the body became more vivid; the gums were spongy, and bled on pressure, and the urine and stools were very dark coloured. With increased difficulty of breathing, cough set in, and there was a good deal of oozing of blood from the gums, mouth, and throat; the cough became more troublesome, and the expectoration consisted of frothy mucus and blood; oozing of blood became more profuse; œdema extended to the thighs; the purpuric spots began to assume a yellow tinge, and he was gradually becoming weaker. He remained conscious to the last, but "wandered" occasionally a little during the night; he ultimately sank three weeks after his admission to hospital.

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The following report of the appearance on post mortem examination of the body is by the surgeon in charge of the hospital:—
“Thighs and legs œdematous; body and legs covered with purpuric blotches and spots. On opening the chest both pleuræ were found to be about half filled with very dark bloody serum; the lungs were gorged with blood, but in other respects healthy; the pericardium contained a considerable quantity of bloody fluid, and the heart was large and flabby with dilated cavities, but no valvular disease existed; the inner surface of the stomach and intestines was mottled with purpuric spots, and the latter contained a quantity of dark-coloured semi-fluid fæces, and was a good deal distended by gas; the liver was much smaller than natural, and had a hobnailed appearance externally; when cut into it had a distinct nutmeg appearance; on the upper surface of the right lobe was a mark like a cicatrix; the kidneys were very large and gorged with blood.”

III. Diseases of the Nervous System, and Organs of the Special Senses.

Class III.

Under this head 124 cases of various forms of disease were entered on the sick-list, of which, sixteen were invalided, and nine proved fatal. The deaths were, five from apoplexy; one from sun-stroke; two from paralysis; and one from epilepsy.

Apoplexy.—There was a fatal case of apoplexy in one of the gunboats, and one in the *Leven*. From the defective nature of the returns from these vessels, no information has been obtained in connection with them.

In the *Ocean*, a private of the Royal Marine Artillery, a man of most intemperate habits, and who only on the forenoon of his death had been removed from his post as sentry for being drunk, died suddenly of apoplexy. On being removed from his post, he was placed as a prisoner in the after cockpit, and on becoming quite sober was released from arrest and allowed to return to his mess. While sitting there playing cards with a messmate at 8 h. 10 p.m., he suddenly fell from off the form on which he was sitting, to the deck. The surgeon says: “I was summoned immediately, and found him lying on his left side, partially supporting the upper part of the trunk on his left arm, which was semiflexed beneath it; the head was thrown back; the eyes wide open, and pupils dilated; the mouth wide open, with froth oozing from it; the head and neck of a livid hue; the body warm; pulseless, and with cessation of the heart’s action. He was dead.” On post-mortem examination, the principal appearances connected with the fatal result were, congestion of the superficial and deep cerebral veins; great serous effusion into both ventricles; and excessive engorgement of both choroid plexuses. The medical officer observes: “He had been under treatment occasionally for dyspeptic symptoms, following a debauch, and a few
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minor surgical diseases, but otherwise had enjoyed good health. No doubt the original cause of the present fatal attack was his intemperate habits, which producing gastric irritation induced cerebral irritation, which is, I believe, acknowledged to be one of the most frequent causes of apoplexy."

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Class III.

There was a fatal case of apoplexy in the *Perseus*. It was considered to be attributable to insolation. The subject of it, a petty officer, was seized at 2 h. a.m. of the 11th of April, at Manilla, with what appeared to be an epileptic fit, the symptoms being quite characteristic of that disease. At 3 h. a.m. the fit passed off, when he complained of a gnawing pain in his bowels, and made frequent attempts at vomiting. On the following day the bowels had not acted, and he complained of headache and thirst. The skin was hot and perspiring, and the tongue coated thickly with a yellow fur. He answered questions very slowly, apparently from defective memory. A blister was applied to the nape, and a purgative of jalap and croton oil administered, which acted freely, and all his symptoms improved much. On the 15th a saline rhubarb mixture was prescribed, which had the effect of keeping his bowels open. The tongue became cleaner, and after this, with the exception of slight headache, he had no bad symptoms. He had passed some round worms during the treatment to which he was subjected, but none had appeared for some days. On the evening of the 22nd he was seen at 8 h. p.m., when, with the exception of slight headache, he reported himself quite well. On the morning of the 23rd he was found dead in his hammock. The report of the post-mortem examination as given by the surgeon* of the ship is as follows: "Rigor mortis present. Body, that of a well-formed muscular man, about five feet six inches in height. A mark of an old scalp wound was the first thing noticed, at the back of the head, over the junction of the left parietal and occipital bones. On reflecting the posterior flap of the scalp, no corresponding injury was however found. Removing the dura mater, the vessels of the pia mater were found to be very much distended, presenting a highly congested character. On the removal of the brain, a number of small black clots were found at its base, particularly on the lower surface of the cerebellum, and surrounding the pons varolii, and the upper part of the medulla and cord, the substance of the brain having a normal appearance; also in both lateral, and the third and fourth ventricles there was no excess of serous fluid." The other organs were healthy. The medical officer remarks in this case that "although at the post-mortem examination there was found to be an entire absence of that congested condition of the lungs which appears almost invariably to occur in cases of insolation, arising from the direct solar rays, yet the condition of the membranes, as well as of the base of the brain, and upper portions of the spinal cord, and the unusually fluid condition of the blood, were such as to leave little doubt in my own mind that this was a case which I can only designate as heat apoplexy,

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* Surgeon Astley Cooper.

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arising from the effect of an ill-ventilated and vitiated condition of the atmosphere acting on a person overheated by the high range of temperature, and fatigues of the day.

Two similar cases to the foregoing occurred on board about the same time, in which the subjects of them were found in a state of insensibility, but by timely interference and removal to the upper deck, where they were exposed as freely as possible to the air, they rallied before sufficient time had elapsed for the insensibility to pass into a condition of coma. With the view of remedying this state of affairs I recommended, as far as was practicable, the spreading of awnings and of side awnings at night, to enable the majority of the men to sleep on the upper deck, thereby relieving the overcrowding below, and giving individually a much larger space for breathing purposes. I need not state that this plan was followed by happy results."

A fatal case of apoplexy occurred at Shanghai in the person of an officer of the Zebra in the month of July, and on one of the hottest days experienced at that place, the temperature in the shade being 98°. The attack was remarkably sudden, and death occurred in less than an hour. On examination after death, about three pints of dark-coloured blood escaped from the skull on removing the calvarium. This was traced to a ruptured branch of the middle meningeal artery; the blood had been lodged between the brain and dura mata, separating them completely all round the head.

IV. Diseases of the Circulatory System.

Class IV.

Twenty-three cases of various forms of disease were entered on the sick-list under this head, of which, twelve were invalided, and one, a case of aneurism of the aorta, proved fatal. It occurred in the person of a Marine of the Ocean, a well built powerfully made man, but of intemperate habits, who after partaking of his dinner with his usual avidity, was walking along the main deck about 1h.30' p.m. of the 25th of December, when in the act of talking with one of his messmates, suddenly experienced a sense of choking, and requested the man to whom he was speaking to support him. He was immediately carried into the sick bay, and when medical assistance arrived about three minutes later, he was in a state of insensibility, and had just vomited some undigested food which had an odour of rum. The surface was warm, and there was some perspiration on the forehead; the pulse could not be felt, and respiration was almost imperceptible; a slight vapour, just enough to slightly dim a polished metal surface, escaping from the mouth, and soon all thoracic and abdominal respiration ceased. The pupils immediately became dilated; the eyes insensible to the touch; and the heart's action, which could barely be felt, was the only indication of vitality. This however, soon ceased, and he died about 2 h. p.m.

On the following day the body was examined, when, "on raising the sternum, the pericardium was observed to be enormously distended, and on opening the sac, a quantity of sanguineous fluid, about fourteen ounces, escaped, leaving a large clot surrounding the heart. The heart itself was normal in size, but exhibited signs of fatty

fatty degeneration; the valves were healthy, and the cavities empty. On examining the arch of the aorta, a distinct fissure of a quarter of an inch in length, was observed on the posterior surface of its ascending portion, about an inch above its origin from the left ventricle. Fatty degeneration of the coats of the vessel extended for some distance, but no atheromatous or calcareous deposits could be detected. There was but a very slight dilatation of the vessel, and a thinning of its walls only in and about the site of the rupture, to the extent of a third part of the calibre of the vessel. The absence of a sac of any size would fully account for the freedom of the deceased from all symptoms of its existence whilst he was alive. The remaining contents of the thoracic and abdominal cavities were healthy."

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Class IV.

A strong, healthy-looking able seaman of the Princess Charlotte was invalided for aneurism of the abdominal aorta. He had been undergoing punishment in prison, one part of which consisted in what is termed "shot drill," and to this cause the disease was attributed. He was discharged to the Melville hospital ship at Hong Kong, from which the following brief statement of his case has been forwarded by the Deputy Inspector General*:— "He had been previously under treatment for about a fortnight, complaining chiefly of vertigo, headache, and debility, without any apparent cause, until a small pulsating tumour was found to exist in the abdomen, close to the umbilicus. During the patient's stay in hospital the tumour increased both in size and strength of pulsation; but the general health somewhat improved. He had never complained of abdominal pulsation until on examination it was observed, and the medical officer† of his ship seemed inclined to attribute its origin to 'hard labour' at shot drill, the man being at the time a prisoner in the naval gaol."

V, and VI. Diseases of the Absorbent System and Ductless Glands.

One hundred and sixteen cases of sympathetic bubo were entered on the sick-list during the year, the average duration of each case being between twenty-eight and twenty-nine days. There can be little doubt that in the majority of these cases the disease was attributable to general constitutional impairment from climatic causes.

Classes V.
and VI.

VII. Diseases of the Respiratory System.

Under this head 378 cases of various forms of disease were entered on the sick-list, of which seven were invalided and two proved fatal. Of the total number, 344 were cases of ordinary catarrh, the average duration of each case being about eight days. The fatal events resulted, in one instance, from hæmoptysis, and in the other from pneumonia.

Class VII.

* Deputy Inspector General Robert Pottinger.

† Assistant Surgeon Robert Nelson.

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Station.
Class VII.

pneumonia. The case of hæmoptysis should more properly have been classed under phthisis, for which disease the subject of the attack had been invalided at Yokohama, and, three hours before his death had embarked on board a contract mail steamer for a passage to England. The attack was sudden and violent, and he died in a few minutes.

The case of pneumonia occurred in the person of an officer's servant. It is reported to have been of the asthenic type, and its unfortunate result to have been mainly attributable to loss of valuable time, occasioned by the patient not reporting himself until he had been for two or three days labouring under the disease. The treatment from the outset was directed to support the strength, and to obviate the marked tendency to sinking, which the symptoms and aspect of the man plainly suggested. Wine and brandy, in small quantities, were frequently and steadily administered, as were also ammonia, æther, beef tea, jelly, and other light nourishment, but without avail, and he expired seven days after being admitted to the sick-list.

Catarrh.—In the Ocean and the Rodney, in which vessels the largest numbers of cases of this affection were entered on the sick-list, some of the attacks were of considerable severity. The staff-surgeon of the latter vessel observes:—"Under this heading are comprised all cases suffering from febrile colds, in whom there was cough, unattended by abnormal physical sounds, coryza, and such-like symptoms." "The majority were simple cases which soon returned to duty; but some were complicated with rheumatic affections, some with cynanche, and others with slight chronic pleuritis, which somewhat lengthened their duration on the list."

In the Ocean the surgeon reports that the greatest number of cases were placed on the sick-list in the first quarter and the least in the second quarter of the year. "No new symptoms worthy of record appeared. Occasionally the stress of the disease fell on the trachea and bronchial tubes, or on the mucous membrane of the alimentary canal, when confinement to bed and a little prolonged treatment were required. Of three cases discharged to hospital, two presented such obscure symptoms that they were sent for closer and more minute observation. In the third case hæmoptysis appeared, and was considered to be dependent on hepatic congestion, the result of occasional fits of intemperance. All returned to duty."

VIII. Diseases of the Digestive System.

Class VIII.

Under this head, 815 cases of various forms of disease were entered on the sick-list, of which thirty-one were invalided and seven proved fatal. The majority of the cases were different varieties of dyspepsia and diarrhoea, 230 cases of the former having been admitted to the list, and 368 of the latter. The dyspeptic cases were in some instances due to the debilitating effects of climate, but in the majority to dietetic irregularities.

Dysentery

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—
Class VIII.

Dysentery and Diarrhœa.—Twenty-four cases of dysentery and 368 of diarrhœa were entered on the sick-list during the year; but several cases of the latter disease became dysenteric and proved fatal. Each case of dysentery was, on an average, twenty-seven days under treatment on board ship and in hospital, and each case of diarrhœa between nine and ten. The vessels in which these diseases prevailed in largest numbers were the *Adventure*, the *Hornet*, the *Ocean*, the *Perseus*, the *Princess Charlotte*, and the *Rodney*.

There were three cases of dysentery and fifteen of diarrhœa in the *Adventure*. Very little information is given with regard to these cases; but they appear, for the most part, to have been of a mild character. The majority of the cases of diarrhœa were considered attributable to atmospheric causes, as they generally occurred in the cool of the morning, and relapses were common at that time.

In the *Hornet* there were seven cases of dysentery and three of diarrhœa. They were for the most part contracted in the *River Min*. The medical officer* remarks:—"The river off *Pagoda Island* is a mile in breadth, with a rise and fall of seventeen feet. They had had a very hot summer here, the thermometer averaging 93° in the shade at noon. Dysentery is the prevailing disease here just now, the merchant shipping suffering in a marked degree. Precautions were taken to guard the crew as much as possible from this disease; no leave was granted; the eating of unripe fruit was forbidden; no work in the sun was permitted during the heat of the day; and those men who slept on deck were made to sling their hammocks some distance from the deck, and to keep under the awnings. The drinking water is got by contract from a spring in the neighbourhood; but the coolies, to spare themselves trouble, sometimes draw it from the river. To obviate this, a petty officer was sent in charge of the tank. It seems to be fair drinking water, but soft, and in appearance free from animal and vegetable impurities. Notwithstanding the above measures, several cases with marked symptoms of dysentery came under treatment. The first appeared on the second day of our arrival in port; the last was placed under treatment on the 20th of September."

In the *Ocean* there were one case of dysentery and twenty-three of diarrhœa. The former disease occurred in the person of a young officer, who had, forty-eight hours previous to his application for treatment, been with a messmate shooting in paddy-fields all day under a hot sun, and, to slake his thirst, had freely and repeatedly drank of the apparently pure-looking water draining from them. "He had, not many months before, been under treatment for constitutional syphilis, followed by typhoid fever, and hence may have been more predisposed to the attack than his companion, a stout, healthy youth, who was only seized with diarrhœa. The attack was in the acute form, and was treated by occasional doses of *Ol. ricini*, to prevent the lodgment of *scybalæ*; a pill, composed of morph. hydrochlor.

* Assistant Surgeon J. B. Drew.

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Class VIII.

hydrochlor. gr. $\frac{1}{4}$, pil. hydrarg. gr. iss., pulv. ipecac. gr. iij, every third hour; opiate enemata, sinapisms, stupes, and hot cataplasms to the abdomen; and a diet composed of farinaceous food, weak broths, and milk. A speedy convalescence ensued, unattended by any symptoms of the chronic form of the disorder."

Of the diarrhœa which prevailed in the vessel, the surgeon remarks, that it mostly occurred in the Michaelmas quarter of the year, when the annual temperature is at its highest range, and the greatest quantity of rain falls. Some of the cases depended upon an acrid or increased secretion of bile occurring in those who had been intemperate. Some of them proved protracted, and were occasionally accompanied by rather urgent symptoms.

There were seven cases of dysentery and seventeen of diarrhœa in the Perseus. Six of the cases of dysentery and eleven of diarrhœa occurred during the midsummer quarter of the year. The former disease appears, from its protracted character, to have been of considerable severity, but no information whatever is given in connection with either form of disease.

In the Princess Charlotte there were fifty cases of diarrhœa and one of dysentery, but no information is given in connection with them. Several of the cases of diarrhœa appear to have assumed dysenteric characters, as it will be perceived, on reference to Table IV., that three deaths from dysentery appear in connection with that vessel.

In the Rodney, in which there were one case of dysentery and ninety-five of diarrhœa, the staff surgeon reports, that the dysenteric case occurred in the chronic form in the person of a worn-out man, a Maltese bandsman, who was invalided on account of the weakened state of his general health.

With respect to the diarrhœa, he observes, "Fifteen cases of this disease occurred in the Lady quarter, ten in the Midsummer, thirty-six in the Michaelmas, and thirty-four in the Christmas quarters. It thus appears that the affection prevailed most during the warm weather, gradually diminished as the more temperate regions were encountered, and again slightly increased when the cold southerly winds were experienced as the ship neared the Cape. Besides climatic influences, the disease was in many instances caused by sudden changes in diet, such as occur frequently in the service when crews pass from fresh to that of a long-continued salt diet. This disease forms a fourteenth of all the cases treated during the period, with an average duration of seven days, and consisted principally of the congestive form of the disease which required, in the first instance, free unloading of the digestive organs, both glandular and intestinal, by the exhibition of hydragogue cathartics, combined with calomel, and followed by some of the usual anodyne and astringent medicines, as ipecacuan with opium, Dover's powder, acetate of lead, with opium, &c.; rest enjoined, low diet strictly observed, and fomentations applied to the abdomen should pain be present. This treatment has always, in my hands, been attended with perfect success. In the practice of others I have often witnessed the bad results

results of astringents used in the early stages of this disease, without having previously prepared the system by the early use of cathartics."

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Station.

Class VIII.

Other Diseases of the Stomach and Bowels.—A fatal case of obstruction of the bowels occurred in the person of a Marine, of the Ocean, who had been sent to the sick quarters, at Yokohama, in November 1868, labouring under primary and secondary syphilis. On the 13th of January 1869 he was seized with severe bilious vomiting, accompanied by pain, and tenderness over the region of the stomach. He vomited a large basinful of dark green fluid, with greenish flocculi floating in it. On the following day, vomiting of a similar kind occurred, and the abdomen became distended and tympanitic. As no discharge from the bowels took place, enemata were exhibited, but they came away without bringing any fæces with them. On the 18th and following days the vomited matters were stercoraceous. On the 20th he vomited an immense quantity of feculent matter, and on the 21st he died.

The report of the post-mortem examination, by the medical officer in charge of sick quarters, is as follows: "The body was much emaciated, and the remains of a syphilitic eruption were present on the trunk and limbs. Belly distended and tympanitic. The thoracic viscera were healthy. On opening the cavity of the abdomen, a considerable quantity of fetid gas escaped. The stomach was normal in appearance; the upper part of the small intestines was much distended with gas, and contained also a large quantity of light yellow coloured fluid fæces. At a point in the ileum, about three feet from its junction with the colon, there was a sudden constriction of its calibre, with inflammatory thickening of its coats, rendering them rigid in a sharply curved position, and nearly obliterating the cavity of the bowel. From this point to the cæcum the bowel was much contracted, admitting with difficulty the blade of the blunt-pointed scissors. The colon also was somewhat contracted throughout its whole length. On opening the intestines it was found that the constricted part was about the calibre of a goose-quill, and it was caused by an exudation of lymph at the site of an old ulcer in one of Peyer's patches. Throughout the whole length of the bowel these patches showed traces of inflammation and ulceration at some previous date, leading me to infer that he must at some period have suffered from a severe attack of enteric fever. The liver and other organs were healthy."

IX. and X. Diseases of the Urinary and Generative Systems.

Under this head 326 cases of various forms of disease were entered on the sick-list, of which seven were invalided. The number of cases of gonorrhœa was 178, and of orchitis 120; the average duration of each case of the former disease being about twenty days, and of the latter a little over eighteen days. Most of the cases classed as orchitis were due to gonorrhœal irritation.

Classes IX.
and X.

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XI. Diseases of the Organs of Locomotion.

Class XI.

Thirty cases of different forms of diseases of the bones and joints were entered on the sick-list during the year, and of these, three were invalided. Of the latter, one was considered unfit for service, from partial ankylosis of the metacarpo-phalangeal joint of the ring finger of the left hand, which had followed a contused and lacerated wound of the adjacent soft parts; and another had very slight mobility of the left elbow-joint, the result of inflammation of the part in a strumous boy. The third case of invaliding occurred in one of the gunboats, and little or no information is given in connection with it.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Classes XII. and XIII.

Under this head 1,315 cases of various forms of disease were entered on the sick-list, of which five were invalided and one proved fatal. Almost all the affections (1,252) were boils, abscesses, and ulcers; the average duration of each case of boil and abscess being about nine days, and of each case of ulcer between twenty-three and twenty-four days.

The fatal case occurred in the person of a seaman of the *Adventure*, who was discharged to the sick quarters, at Yokohama, with a sloughing ulcer over the metatarso-phalangeal joint of the great toe. The ulcer healed, but he gradually sank and died from anæmia. He took nourishment freely, and did not lose very much flesh. On examining the internal organs after death, disease of the spleen and left kidney was found, and all the viscera were extremely pale and anæmic. The opinion of the medical officer in charge of the sick quarters was that the case was one of leucocythemia.

Unclassed Diseases.

Under this head appear ninety cases of debility, doubtless from climatic causes, of which twenty-three were invalided; fourteen of delirium tremens, of which one was invalided; and two of poisoning, of which one was invalided, and one proved fatal.

Delirium Tremens.—Of this disease four cases occurred in the persons of petty officers; two, in able seamen; one, in one of the carpenter's crew; four, in Marines; two, in bandsmen, and in one instance the rating has not been ascertained.

Poisoning.—The fatal case of alcoholic poisoning occurred in the person of a healthy young ordinary seaman of the *Ocean*, at Yokohama. He had been on shore on twenty-four hours' leave, and came on board, at the expiry of the time, intoxicated. He had been drinking heavily, while on shore, a cheap spirit manufactured there, and sold under the name of "Old Tom." He had, apparently, recovered, in so far, from his debauch, but next day he complained
to

to his messmates of headache and loss of appetite, which he attributed to his fit of drunkenness. He had gone to bed as usual on the following evening, but in the morning, not "turning out" with the rest of the ship's company, he was spoken to, but only replied by a groan. Five minutes later, a man who was passing noticed a sudden pallor overspread his features, and called the medical officer, who found that the man had just died. He was of most intemperate habits, it appeared, and invariably got drunk when he went on shore.

The principal post-mortem appearances are; excessively contracted stomach, the peritoneum covering the anterior surface and lower curvature of which was inflamed. It was found to contain nearly two ounces of a thin sanguineous-coloured fluid, probably the result of exudation. The mucous coat was inflamed and thrown into numerous longitudinal plaits, excessively rugose, and covered with a thick tenacious mucus. All other organs appeared healthy.

Wounds and Injuries.

One man who fell from aloft died from the effect of internal injuries.

Twelve men were drowned; of these seven fell overboard, four were found drowned, and the circumstances under which one man was drowned have not been ascertained.

The total number of deaths in the squadron was fifty-one, which is in the ratio of 13·6 per 1,000 of force, being an increase, compared with the preceding year, equal to ·6 per 1,000.

Invalided.

Under General Diseases, Section A, seventeen persons were invalided, viz., three for simple continued fever, eight for ague, and six for remittent fever. Under Section B. fifty-nine were invalided, of which ten were for rheumatism; three for primary syphilis; twenty for secondary syphilis; three for scrofula; and twenty-three for phthisis pulmonalis. Sixteen persons were invalided for diseases of the nervous system and organs of the special senses; twelve for diseases of the circulatory system; seven for diseases of the respiratory system; thirty-one for diseases of the digestive system; seven for diseases of the urinary and generative systems; three for diseases of the organs of locomotion; five for diseases of the cellular tissue and cutaneous system; twenty-five for unclassified diseases, and six for wounds and injuries of various kinds. The total number invalided was 188, which is in the ratio of 50·1 per 1,000, being a reduction, compared with the preceding year, equal to 15· per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all DISEASES and INJURIES, and the Number
INVALIDED and DEAD, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A. :						
Small-Pox - - - -	40	11·4	-	-	4	1·
Typhus Fever - - -	9	2·5	-	-	1	·2
Enteric Fever - - -	2	·5	-	-	1	·2
Simple Continued Fever	315	99·5	3	·8	1	·2
Ague - - - - -	77	22·1	8	2·1	1	·2
Remittent Fever - - -	52	14·9	6	1·6	1	·2
Mumps - - - - -	6	1·7	-	-	-	-
Erysipelas - - - -	4	1·1	-	-	-	-
II. General Diseases, Section B. :						
Rheumatism - - - -	252	72·4	10	2·6	-	-
Gout - - - - -	11	3·1	-	-	-	-
Syphilis { Primary - -	318	91·4	3	·8	-	-
{ Secondary - -	165	47·4	20	5·3	-	-
Scrofula - - - - -	9	2·5	3	·8	-	-
Phthisis Pulmonalis - -	18	5·1	23	6·1	7	1·8
Purpura - - - - -	2	·5	-	-	1	·2
Dropsy - - - - -	11	3·1	-	-	-	-
III. Diseases of the Nervous System, and Organs of the Special Senses:						
Apoplexy - - - - -	5	1·4	-	-	5	1·3
Sunstroke - - - - -	21	6·	1	·2	1	·2
Paralysis - - - - -	7	2·	2	·5	2	·5
Vertigo - - - - -	3	·8	-	-	-	-
Epilepsy - - - - -	9	2·5	5	1·3	1	·2
Neuralgia - - - - -	17	4·8	3	·8	-	-
Insanity - - - - -	1	·2	2	·5	-	-
Hysteria - - - - -	1	·2	-	-	-	-
Diseases of the Eye - -	57	16·3	3	·8	-	-
Diseases of the Ear - -	2	·5	-	-	-	-
Diseases of the Nose - -	1	·2	-	-	-	-

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the { Functional -	17	4·8	4	1·	—	—
Heart { Organic -	3	·8	3	·8	—	—
Aneurism - - -	1	·2	1	·2	1	·2
Varicose Veins - - -	2	·5	4	1·	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	116	33·3	—	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	1	·2	—	—	—	—
Catarrh - - - - -	344	98·8	—	—	—	—
Hæmoptysis - - - -	5	1·4	1	·2	1	·2
Other Diseases of the Lungs -	28	8·	6	1·6	1	·2
VIII. Diseases of the Digestive System:						
Cynanche - - - -	87	25·	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - -	5	1·4	—	—	—	—
Dyspepsia - - - -	230	66·	7	1·8	—	—
Dysentery - - - -	24	6·8	6	1·6	4	1·
Diarrhoea - - - -	368	105·7	9	2·4	—	—
Colic and Constipation - -	39	11·2	—	—	—	—
Hæmorrhoids - - - -	21	6·	1	·2	—	—
Hernia - - - - -	6	1·7	3	·8	—	—
Worms - - - - -	6	1·7	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - -	8	2·2	1	·2	3	·8
Diseases of the Liver, Spleen, &c. - - - -	21	6·	4	1·	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	6	1·7	4	1·	—	—
Gonorrhœa - - - -	178	51·1	1	·2	—	—
Diseases of the Organs of Generation - - - -	7	2·	1	·2	—	—
Stricture - - - -	15	4·3	1	·2	—	—
Orchitis - - - -	120	34·4	—	—	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c.	30	8·6	3	·8	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	940	270·1	2	·5	—	—
Ulcer - - - -	312	89·6	2	·5	1	·2
Erythema - - - -	2	·5	—	—	—	—
Diseases of the Skin - -	41	11·7	1	·2	—	—
Scabies - - - -	20	5·7	—	—	—	—
Unclassed:						
Debility - - - -	90	25·8	23	6·1	—	—
Delirium Tremens - - -	14	4·	1	·2	—	—
Poisoning - - - -	2	·5	1	·2	1	·2
Wounds and Injuries:						
Wounds, Injuries, &c. - -	673	193·3	6	1·6	1	·2
Burns and Scalds - - -	35	10·	—	—	—	—
Submersion and Drowning -	10	2·8	—	—	12	3·2
TOTALS - - -	5,242	1,506·3	188	50·1	51	13·6

TABLE, No. 2.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-Pox - - - -	181	595	776	2.1	.5
Typhus Fever - - - -	128	109	237	.6	.1
Enteric Fever - - - -	38	305	343	.9	.2
Simple continued Fever - -	2,544	1,535	4,079	11.1	2.9
Ague - - - -	529	246	775	2.1	.5
Remittent Fever - - - -	534	240	774	2.1	.5
Mumps - - - -	47	-	47	.1	—
Erysipelas - - - -	69	18	87	.2	—
II. General Diseases, Section B.:					
Rheumatism - - - -	2,385	1,610	3,995	10.9	2.9
Gout - - - -	71	-	71	.1	—
Syphilis - {Primary - - - -	6,442	5,981	12,423	34.	9.
- {Secondary - - - -	2,635	3,158	5,793	15.8	4.2
Scrofula - - - -	134	102	236	.6	.1
Phthisis Pulmonalis - - -	457	893	1,350	3.6	.9
Purpura - - - -	13	-	13	—	—
Dropsy - - - -	50	46	96	.2	—
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Apoplexy - - - -	20	-	20	—	—
Sunstroke - - - -	147	38	185	.5	.1
Paralysis - - - -	49	328	377	1.	.2
Vertigo - - - -	16	15	31	—	—
Epilepsy - - - -	184	48	232	.6	.1
Neuralgia - - - -	149	107	256	.7	.1
Insanity - - - -	5	101	106	.2	—
Hysteria - - - -	1	4	5	—	—
Diseases of the Eye - - -	689	268	957	2.6	.6
Diseases of the Ear - - -	17	22	39	.1	—
Diseases of the Nose - - -	1	6	7	—	—

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:					
Disease of the { Functional -	177	353	530	1.4	.3
Heart { Organic -	34	-	34	—	—
Aneurism - - - -	1	44	45	.1	—
Varicose Veins - - -	7	13	20	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - -	2,695	595	3,290	9.	2.4
VII. Diseases of the Respiratory System:					
Diseases of the Larynx - -	37	15	52	.1	—
Catarrh - - - - -	2,478	356	2,834	7.7	2.
Hæmoptysis - - - -	25	72	97	.2	—
Other Diseases of the Lungs -	509	371	880	2.4	.6
VIII. Diseases of the Digestive System:					
Cynanche - - - - -	542	5	547	1.4	.3
Diseases of the Mouth, Teeth, &c. - - - - -	78	74	152	.4	.1
Dyspepsia - - - - -	1,699	185	1,884	5.1	1.3
Dysentery - - - - -	375	273	648	1.7	.4
Diarrhœa - - - - -	2,334	1,131	3,465	9.4	2.5
Colic and Constipation - -	193	29	222	.6	.1
Hæmorrhoids - - - -	157	106	263	.7	.1
Hernia - - - - -	49	10	59	.1	—
Worms - - - - -	33	-	33	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	107	160	267	.7	.1
Diseases of the Liver, Spleen, &c. - - - - -	243	383	626	1.7	.4

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys - -	42	23	65	.1	—
Gonorrhœa - - - - -	3,129	864	3,493	9.5	2.5
Diseases of the Organs of Generation - - - - -	90	288	378	1.	.2
Stricture - - - - -	70	196	266	.7	.1
Orchitis - - - - -	1,644	549	2,193	6.	1.6
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - - -	505	321	826	2.2	.5
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	7,785	715	8,500	23.2	6.1
Ulcer - - - - -	5,455	1,891	7,346	20.1	5.3
Erythema - - - - -	7	—	7	—	—
Diseases of the Skin - -	673	88	761	2.	.5
Scabies - - - - -	194	—	194	.5	.1
Unclassed:					
Debility - - - - -	810	908	1,718	4.7	1.2
Delirium Tremens - - -	116	106	222	.6	.1
Poisoning - - - - -	3	—	3	—	—
Wounds and Injuries:					
Wounds, Injuries, &c. - -	7,199	1,599	8,798	24.1	6.4
Burns and Scalds - - -	431	9	440	1.2	.3
Submersion and Drowning -	8	—	8	—	—
TOTALS - - -	57,469	27,007	84,476	231.4	61.7

TABLE, No. 3. - - - - -

SHOWING the Number INVALIDED from each Ship - - - -

CAUSE OF INVALIDING.	Adventure.	Algerine.	Argus.	Avon.	Cormorant.	Dwarf.	Elk.	Gunboats.
I. General Diseases, Section A.:								
Continued Fever - - -	-	-	-	-	-	-	-	1
Ague - - - - -	-	-	-	2	-	-	-	5
Remittent Fever - - -	-	-	-	1	-	1	-	2
II. General Diseases, Section B.:								
Rheumatism - - - -	1	-	-	-	-	-	-	2
Syphilis, { Primary - - -	-	-	-	-	-	-	-	1
{ Secondary - - -	-	-	-	-	1	-	-	1
Scrofula - - - - -	-	-	-	-	-	-	-	1
Phthisis - - - - -	1	2	-	2	-	-	-	4
III. Diseases of the Nervous System, and Organs of the Special Senses:								
Sunstroke - - - - -	-	-	-	-	-	-	-	-
Paralysis - - - - -	-	-	-	1	-	-	-	-
Epilepsy - - - - -	-	-	-	1	-	1	-	-
Neuralgia - - - - -	-	-	1	-	-	-	-	-
Insanity - - - - -	1	-	-	-	-	-	-	1
Diseases of the Eye - - -	-	1	-	-	-	-	-	1
IV. Diseases of the Circulatory System:								
Disease of the { Functional - - -	-	-	-	-	-	-	-	1
Heart - { Organic - - -	-	-	-	-	-	1	-	1
Aneurism - - - - -	-	-	-	-	-	-	-	-
Varicose Veins - - - -	1	-	-	-	-	-	-	1
VII. Diseases of the Respiratory System:								
Hæmoptysis - - - - -	-	-	-	-	-	-	-	-
Other Diseases of the Lungs -	-	-	-	-	-	-	-	3

TABLE, No. 3.

employed on the CHINA STATION.

Hornet.	Icarus.	Leven.	Midge.	Ocean.	Pearl.	Perseus.	Princess Charlotte.	Rifeman.	Rinaldo.	Rodney.	Salamis.	Slaney.	Sylvia.	Zebra.	TOTAL.
-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	3
-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
-	-	-	-	-	-	1	2	-	-	1	1	-	-	1	10
-	-	-	-	1	-	1	3	-	-	-	-	-	-	-	3
-	-	-	1	1	5	1	3	-	2	6	-	-	-	1	20
-	-	-	-	-	1	-	3	-	2	5	1	-	1	-	3
-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	23
-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	2
-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	5
-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	4
-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	6

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued*.

CAUSE OF INVALIDING.	Adventure.	Algerine.	Argus.	Aron.	Cormorant.	Dwarf.	Elk.	Gunboats.
VIII. Diseases of the Digestive System:								
Dyspepsia - - - -	1	-	-	-	-	-	-	4
Dysentery - - - -	1	-	-	-	-	-	-	1
Diarrhoea - - - -	-	-	-	-	-	-	-	4
Hæmorrhoids - - - -	-	-	-	-	-	-	-	-
Hernia - - - -	1	-	-	-	-	-	-	1
Fistula in Ano - - - -	-	-	-	-	-	-	-	-
Diseases of the Liver, Spleen, &c. - - - -	-	-	-	1	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems:								
Diseases of the Kidneys - -	-	-	-	-	-	1	-	-
Gonorrhœa - - - -	-	-	-	-	-	-	1	-
Stricture - - - -	-	-	-	-	-	-	-	-
Urinary Abscess - - - -	-	-	-	-	-	-	-	-
XI. Diseases of the Organs of Locomotion:								
Diseases of the Bones, Joints, &c. - - - -	-	-	-	-	-	-	-	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:								
Abscess - - - -	-	-	-	-	-	-	-	-
Ulcer - - - -	-	-	-	-	-	-	-	1
Diseases of the Skin - - -	-	-	-	-	-	-	-	-
Unclassed:								
Debility - - - -	-	2	1	3	-	2	-	2
Delirium Tremens - - -	-	-	-	-	-	-	-	-
Poisoning by Lead - - -	-	-	-	-	-	-	-	-
Wounds and Injuries:								
Wounds, Injuries, &c. - -	1	-	-	1	-	-	-	2
TOTALS - - -	8	5	2	12	1	6	1	41

TABLE, No. 3.—Showing the Number Invalided from each Ship, &c.—*continued*.

Hornet.	Levra.	Leven.	Midge.	Ocean.	Pearl.	Perseus.	Princess Charlotte.	Riflesman.	Rinaldo.	Rodney.	Salama.	Shaney.	Sylvia.	Zebra.	TOTAL.
-	-	-	-	-	-	1	3	-	1	1	-	-	-	-	7
-	-	-	-	-	-	-	4	-	-	1	-	-	-	-	6
-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	9
-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	4
-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	4
-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1
-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2
-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
1	1	-	-	2	1	-	2	1	-	4	-	-	-	1	23
-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	1
-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	6
3	2	1	2	12	11	3	28	3	9	24	3	2	5	4	188

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the CHINA STATION.

CAUSE OF DEATH.	Adventure.	Avon.	Cormorant.	Gunboats.	Icarus.	Leven.	Ocean.	Pearl.	Persens.	Princess Charlotte.	Rifleman.	Rodney.	Zebra.	Total.
I. General Diseases, Section A.:														
Small Pox - - - -	-	-	-	1	2	1	-	-	-	-	-	-	-	4
Typhus Fever - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Enteric Fever - - -	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Continued Fever - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Intermittent Fever - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Remittent Fever - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	1
II. General Diseases, Section B.:														
Phthisis - - - -	-	-	1	-	-	-	-	1	-	1	-	4	-	7
Purpura - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
III. Diseases of the Nervous System and Organs of the Special Senses:														
Apoplexy - - - -	-	-	-	1	-	1	1	-	1	-	-	-	1	5
Sunstroke - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Paralysis - - - -	-	-	-	-	1	-	1	-	-	-	-	-	-	2
Epilepsy - - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	1
IV. Diseases of the Circulatory System:														
Aneurism - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
VII. Diseases of the Respiratory System:														
Hæmoptysis - - - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Pneumonia - - - -	-	-	-	-	-	-	-	-	-	-	-	1	-	1

TABLE, No. 4. — Showing the Number of Deaths in each Ship, &c. — *continued.*

CAUSE OF DEATH.	Adventure.	Avon.	Cormorant.	Gunboats.	Icarus.	Leven.	Ocean.	Pearl.	Perseus.	Princess Charlotte.	Rifleman.	Rodney.	Zebra.	TOTAL.
VIII. Diseases of the Digestive System:														
Dysentery - - - -	-	1	-	-	-	-	-	-	-	3	-	-	-	4
Other Diseases of the Stomach	-	-	1	-	-	-	1	-	-	1	-	-	-	3
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:														
Ulcer - - - -	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Unclassed:														
Alcoholic Poisoning - -	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Wounds and Injuries:														
Wounds, &c. - - - -	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Submersion and Drowning -	-	-	-	3	2	-	2	-	-	1	1	2	1	12
TOTAL - - -	1	2	3	7	5	2	10	1	2	6	1	9	2	51

TABLE, No. 5. - - - - -

SHOWING the Number of CASES of all DISEASES and - - - - -

DISEASE OR INJURY.	Adventur.	Algine.	Argus.	Aven.	Comorant.	Dwarf.	Flk.	Horst.
I. General Diseases, Section A. :								
Small Pox - - - - -	-	-	-	-	-	-	-	-
Typhus Fever - - - - -	-	-	2	-	-	-	-	-
Enteric Fever - - - - -	-	-	-	-	-	-	-	-
Simple continued Fever - - - - -	8	5	-	26	1	7	-	7
Ague - - - - -	-	-	-	11	4	5	-	2
Remittent Fever - - - - -	8	2	2	-	-	3	13	-
Mumps - - - - -	-	-	-	-	-	-	1	-
Erysipelas - - - - -	-	-	1	-	-	-	-	-
II. General Diseases, Section B. :								
Rheumatism - - - - -	11	3	13	19	8	13	-	1
Gout - - - - -	1	-	-	-	-	2	-	-
Syphilis { Primary - - - - -	6	6	6	11	8	3	3	-
{ Secondary - - - - -	9	1	4	3	11	-	-	2
Scrofula - - - - -	-	1	-	-	-	-	-	-
Phthisis Pulmonalis - - - - -	1	1	-	-	-	-	-	-
Purpura - - - - -	-	-	-	-	-	-	-	-
Dropsy - - - - -	-	-	-	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses :								
Apoplexy - - - - -	-	-	-	1	-	-	1	-
Sunstroke - - - - -	-	-	-	1	-	-	-	-
Paralysis - - - - -	-	-	-	2	-	-	1	-
Vertigo - - - - -	-	-	-	-	-	-	-	-
Epilepsy - - - - -	-	-	-	1	1	2	-	-
Neuralgia - - - - -	1	-	2	1	-	1	-	-
Insanity - - - - -	1	-	-	-	-	-	-	-
Hysteria - - - - -	-	-	1	-	-	-	-	-
Diseases of the Eye - - - - -	3	3	1	-	3	-	-	-
Diseases of the Ear - - - - -	-	-	-	-	-	-	-	-
Diseases of the Nose - - - - -	-	-	-	-	-	-	-	-
IV. Diseases of the Circulatory System :								
Disease of { Functional - - - - -	2	-	1	1	-	1	1	-
the Heart, { Organic - - - - -	-	-	-	-	-	-	-	-
Aneurism - - - - -	-	-	-	-	-	-	-	-
Varicose Veins - - - - -	1	-	-	-	-	-	-	-
V. & VI. Diseases of the Absorbent Sys- tem and Ductless Glands :								
Bubo (<i>Symp.</i>) - - - - -	6	3	2	2	3	2	1	1

TABLE, No. 5.

INJURIES in the Ships employed on the CHINA STATION.

Icarus.	Leven.	Manilla.	Midge.	Ocean.	Pearl.	Pereus.	Princess Charlotte.	Riflesman.	Risaldo.	Rodney.	Salamia.	Slaney.	Sylvia.	Zebra.	TOTAL.
11	4	-	-	-	-	-	-	-	-	-	1	-	-	24	40
1	-	-	-	6	-	-	-	-	-	-	-	-	-	-	9
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
9	2	1	3	4	4	6	55	-	4	184	1	1	10	31	315
1	1	-	7	4	2	7	1	17	2	3	3	-	-	7	77
-	-	-	2	-	-	-	-	9	1	2	2	7	-	1	52
-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	6
-	-	-	-	1	-	-	-	-	1	-	-	-	1	-	4
15	4	-	3	19	20	3	25	1	8	51	14	4	10	7	252
-	1	-	-	-	-	2	-	-	1	4	-	-	-	-	11
9	1	4	3	70	23	5	17	1	9	84	10	12	16	12	318
7	-	-	1	47	29	5	12	1	8	14	-	1	5	5	165
-	-	-	-	2	3	-	-	-	-	2	-	-	-	1	9
-	-	-	-	1	-	-	3	-	-	8	2	-	-	2	18
1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	1	-	10	-	-	-	-	11
-	1	-	-	1	-	-	-	-	-	-	-	-	-	1	5
-	-	-	-	1	-	1	1	-	-	11	-	-	-	7	21
1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	7
-	-	-	-	-	-	-	1	1	1	9	-	-	-	-	3
1	-	-	-	1	-	-	1	-	1	1	-	-	-	-	9
4	-	-	-	2	1	-	1	-	1	1	-	-	1	1	17
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	7	8	3	2	1	3	13	1	2	6	1	57
-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	2
-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
1	-	-	-	1	1	-	1	1	1	1	-	-	-	4	17
-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3
-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
8	1	3	1	7	6	3	6	-	5	36	4	2	4	10	116

TABLE, No. 5.—Showing the Number of Cases of all Diseases and

DISEASE OR INJURY.	Adventure.	Algerine.	Argus.	Avon.	Cormorant.	Dwarf.	Elk.	Hornet.
VII. Diseases of the Respiratory System :								
Diseases of the Larynx - - - -	-	-	-	-	-	-	1	-
Catarrh - - - - -	10	6	7	7	5	8	7	3
Hæmoptysis - - - - -	-	1	-	1	-	-	-	-
Other Diseases of the Lungs - - -	-	2	-	-	-	-	-	-
VIII. Diseases of the Digestive System :								
Cynanche - - - - -	4	-	4	1	-	4	-	-
Diseases of Mouth, Teeth, &c. - -	-	1	-	-	-	-	1	-
Dyspepsia - - - - -	8	8	5	8	5	12	11	1
Dysentery - - - - -	3	-	-	-	1	1	-	7
Diarrhœa - - - - -	15	19	6	14	10	24	4	3
Colic and Constipation - - - - -	1	-	-	1	-	2	1	1
Hæmorrhoids - - - - -	-	-	2	-	-	2	-	-
Hernia - - - - -	2	-	-	-	-	1	-	-
Worms - - - - -	-	1	-	-	-	2	-	-
Other Diseases of Stomach, Intestines, &c.	-	-	-	-	-	1	-	-
Diseases of Liver, Spleen, &c. - -	-	1	-	-	2	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems :								
Diseases of the Kidneys - - - -	-	1	-	-	-	-	-	-
Gonorrhœa - - - - -	5	1	-	10	7	1	5	-
Diseases of the Organs of Generation -	-	-	-	1	-	-	-	-
Stricture - - - - -	-	1	-	-	-	-	-	-
Orchitis - - - - -	10	6	3	2	3	3	-	-
XI. Diseases of the Organs of Locomotion :								
Diseases of the Bones, Joints, &c. -	-	2	-	2	-	-	1	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :								
Phlegmon and Abscess - - - - -	15	18	19	25	20	31	40	11
Ulcer - - - - -	6	4	8	24	-	3	-	3
Erythema - - - - -	-	-	-	-	-	-	-	-
Diseases of the Skin - - - - -	-	-	2	2	2	1	1	6
Scabies - - - - -	-	-	-	-	1	-	4	1
Unclassed :								
Debility - - - - -	1	-	7	10	-	16	1	7
Delirium Tremens - - - - -	1	-	-	-	-	-	-	-
Poisoning - - - - -	-	-	-	-	-	-	-	-
Wounds and Injuries :								
Wounds, &c. - - - - -	35	16	25	35	13	12	14	2
Burns and Scalds - - - - -	3	-	3	1	-	3	-	-
Submersion and Drowning - - - -	-	-	-	-	-	-	-	-
TOTALS - - -	176	113	126	223	108	165	112	58

Injuries in the Ships employed on the China Station—*continued.*

Icarus.	Leven.	Manilla.	Midge.	Ocean.	Pearl.	Perseus.	Princess Charlotte.	Rifeman.	Rinaldo.	Rodney.	Salamis.	Slaney.	Sylvia.	Zebra.	Total.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
22	5	-	1	67	38	6	19	-	4	95	10	4	14	6	344
-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	5
2	-	-	1	1	2	2	2	-	5	7	-	-	1	3	28
4	-	-	2	8	7	3	7	-	14	18	3	1	-	7	87
-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	5
10	3	-	3	47	1	3	21	2	14	42	11	5	4	6	230
-	-	-	-	1	-	7	1	-	-	1	-	-	2	-	24
6	5	-	13	23	8	17	50	1	16	95	14	3	12	15	368
-	-	-	1	-	6	3	4	5	5	7	1	-	-	1	39
1	-	-	-	2	3	-	-	-	1	4	4	1	-	1	21
-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	6
-	-	-	-	-	-	-	1	-	-	2	-	-	-	-	6
1	-	-	-	1	-	-	1	-	-	1	-	-	1	2	8
-	-	-	-	2	1	1	4	-	-	5	-	-	6	-	21
-	-	-	-	1	1	-	1	-	-	1	-	-	-	-	6
10	3	1	2	11	7	3	12	3	36	20	15	5	12	9	178
-	-	-	-	2	-	-	4	-	-	-	-	-	-	-	7
-	1	-	-	1	1	2	-	-	-	7	-	1	1	-	15
4	2	3	1	19	5	2	6	2	3	22	6	2	7	9	120
1	2	-	1	6	2	-	-	-	6	5	-	-	1	-	30
34	5	-	6	116	51	38	59	3	34	319	16	27	38	15	940
6	3	2	4	82	3	10	22	7	25	79	8	8	3	2	312
-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2
2	-	-	-	4	-	1	4	1	6	10	-	-	-	-	41
-	-	-	-	3	1	-	5	-	-	3	-	-	2	-	20
4	1	-	5	8	3	2	14	-	-	-	3	-	4	4	90
-	-	-	-	2	1	-	2	-	-	8	-	-	-	-	14
-	-	-	(a)1	-	-	-	-	-	-	(b)1	-	-	-	-	2
22	6	2	3	122	39	20	26	5	41	179	10	14	16	16	673
-	2	-	-	5	-	2	3	4	-	8	-	-	1	-	35
2	-	-	-	2	-	-	-	1	1	3	-	-	-	1	10
200	53	17	63	721	272	158	308	69	258	1,323	139	100	178	212	5,242

(a) Alcohol.

(b) Lead.

TABLE, No. 6. - - - - -

SHOWING the Names of the SHIPS; the Average Complements, &c.; the Number of Men Sick Daily, in each Ship;

P. O. Paid off.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.
Iron Clad - -	Ocean - - - -	Devonport -	30 July 1866	24	4,047	S. 1,000
Second Rate -	Rodney - - - -	Sheerness -	21 Jan. 1867	72	2,770	S. 500
Sixth Rate - -	Pearl - - - -	Portsmouth	5 May 1866	17	1,469	S. 400
Sloop - - -	Argus - - - -	Hong Kong	23 Jan. 1866	6	981	P. 300
	Icarus - - - -	Sheerness -	28 Feb. 1866	3	580	S. 150
	Perseus - - - -	Hong Kong	23 Jan. 1866	15	955	S. 200
	Rinaldo - - - -	Portsmouth	1 Nov. 1866	7	951	S. 200
	Zebra - - - -	Woolwich -	13 Feb. 1867	7	951	S. 200
Gun Vessel - -	Algerine - - - -	Hong Kong	1 July 1868	3	299	S. 80
	Avon - - - -	Portsmouth	21 April 1868	4	467	S.S. 120
	Cormorant - - - -	Hong Kong	23 Jan. 1866	4	695	S. 200
	Dwarf - - - -	Woolwich -	18 April 1868	4	465	S.S. 120
	Elk - - - -	Portsmouth	5 Dec. 1868	4	465	S.S. 120
	Hornet - - - -	Portsmouth	9 Dec. 1868	4	464	S.S. 120
	Leven - - - - D.	Hong Kong	25 May 1867	3	300	S. 80
	Midge - - - -	Devonport -	19 Feb. 1869	4	464	S.S. 120
Steam Vessel -	Slaney - - - -	Hong Kong	1 July 1868	3	301	S. 80
	Manilla - - - P.O.	Shanghai -	1 Feb. 1866	-	295	S. 70
	Salamis - - - -	Portsmouth	1 Jan. 1866	2	835	P. 250
Surveying Vessel -	Rifleman - - - P.O.	Hong Kong	31 March 1866	4	486	S. 100
	Sylvia - - - - D.	Woolwich -	12 Oct. 1866	5	695	S. 150
Troop Ship - -	Adventure - - - -	Hong Kong	28 May 1867	2	1,794	S. 400
Receiving Ship -	Princess Charlotte - -	Hong Kong	1 Jan. 1866	12	2,443	-

- - - - - TABLE, No. 6.

Cases; the Total Number of Days' Sickness on Board; the Average Number of and the Number Discharged to Hospital.

D. Returns defective.

Period.	Average Com- plements.	Average Com- plements corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
Year - -	660	660	721	10,595	29·	43·9	73
Year - -	765	765	1,323	14,368	39·3	51·3	88
Year - -	275	275	272	2,624	7·1	25·8	40
1 Jan. to 30 June	160	80	126	970	2·6	32·5	15
Year - -	130	130	200	2,428	6·6	50·7	28
1 Jan. to 30 June	185	90	158	1,439	3·9	43·3	9
Year - -	180	180	258	3,849	10·5	58·3	12
Year - -	200	200	212	2,203	6·	30·	57
Year - -	50	50	113	1,203	3·2	64·	14
Year - -	65	65	223	2,036	5·5	84·6	28
Year - -	90	90	108	885	2·4	26·6	15
Year - -	70	70	165	1,318	3·6	51·4	6
20 April to 31 Dec.	70	45	112	1,026	2·8	62·2	-
1 July to 31 Dec.	75	35	58	649	1·7	48·5	6
Year - -	50	45	53	535	1·4	31·1	7
1 Oct. to 31 Dec.	80	20	63	267	·7	35·	15
Year - -	50	50	100	1,425	3·9	78·	4
1 Jan. to 15 June	50	25	17	315	·8	32·	4
Year - -	80	80	139	1,576	4·3	53·7	22
1 Jan. to 24 Aug.	90	60	69	664	1·8	30·	14
Year - -	110	100	178	2,562	7·	70·	23
Year - -	145	145	176	1,745	4·7	32·4	16
Year - -	220	220	398	3,107	8·5	38·6	42

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THE squadron on this station during the year 1869 comprised four vessels, viz., two of the sixth rate, and two sloops. The returns from each of the vessels were for the whole year. The mean force, corrected for time, was 760, and the total number of cases of disease and injury entered on the sick-list 1,425, which is in the ratio of 1875 per 1,000 of force, being an increase, compared with the preceding year, equal to 291·8 per 1,000. Of these, twenty-five were invalided and seven proved fatal, the ratio of the former being 32·8 and the latter 9·2 per 1,000. Compared with the previous year there was an increase in the invaliding rate to the extent of 2·4 per 1,000, but there was a reduction in the ratio of mortality equal to ·4 per 1,000.

The average daily loss of service from General Diseases, Section A., was in the ratio of 1 per 1,000, and from Section B. 7·8. From diseases of the nervous system and organs of the special senses, the average daily sick-rate was 2·5; from diseases of the circulatory system, ·1; of the absorbent system and ductless glands, ·1; of the respiratory system, 4·3; of the digestive system, 4·5; of the urinary and generative systems, 2·2; of the cellular tissue and cutaneous system, 14·6; from unclassified diseases, 1·1; and from wounds and injuries of various kinds, 13·4. The average number of men sick daily was 42·5, which is in the ratio of 55·9 per 1,000, being an increase, compared with the previous year, equal to 4·3 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

Class I. Sect. A.

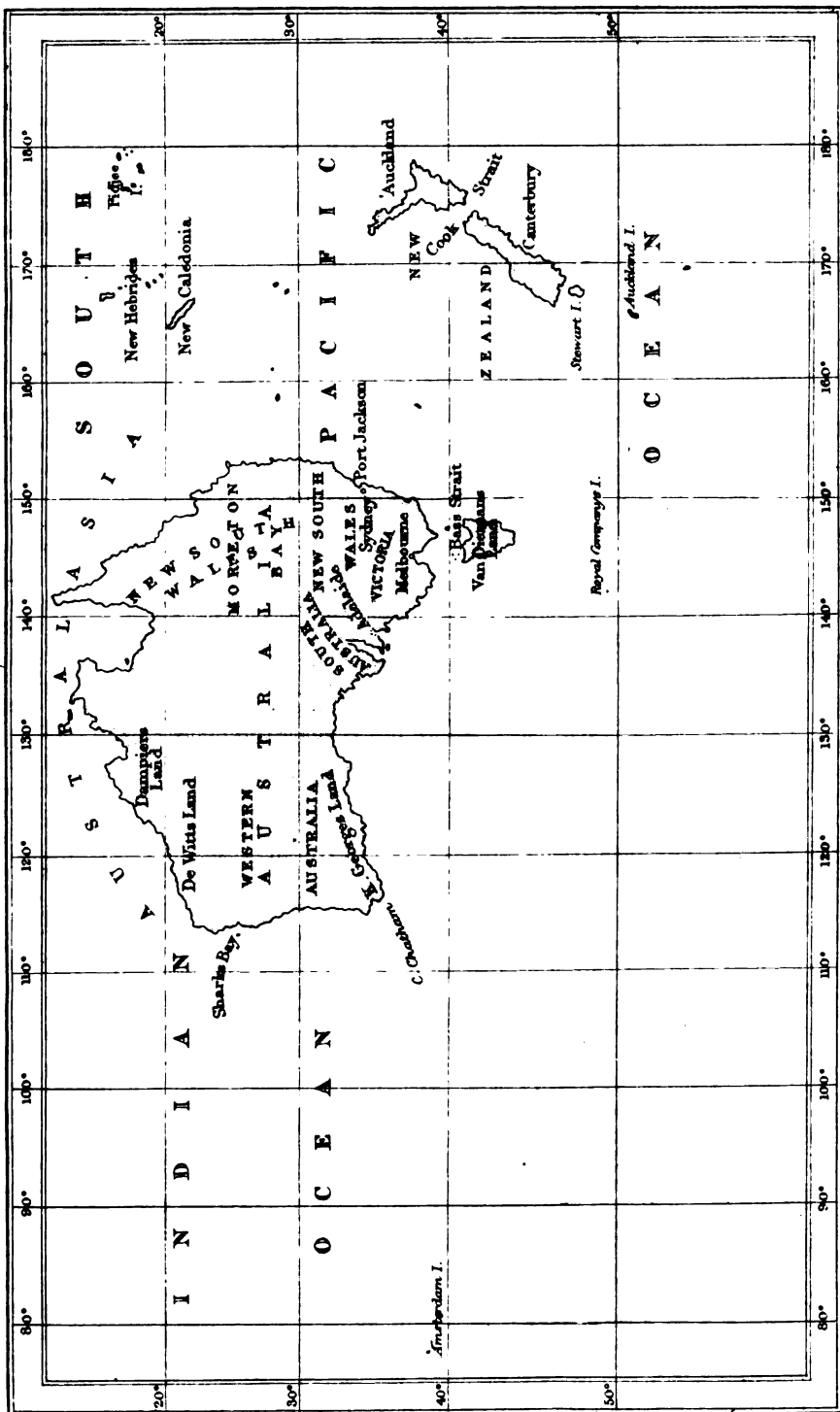
Under this head thirty-four cases of various forms of disease were entered on the sick-list, viz., six of enteric fever; twelve of simple continued fever; four of ague; eleven of remittent fever; and one case of erysipelas; and of these one case of enteric fever proved fatal.

The average duration of each case of enteric fever, on board ship and in hospital, was about nine days, so that, with one exception, they cannot have been of great severity; of each case of continued fever a little over eleven days; of each case of ague a little over four days; of each case of remittent fever about eighteen days; and the case of erysipelas was thirty-one days under treatment.

Enteric Fever.—In the *Blanche* there were four cases of this form of fever, all apparently exceedingly mild. The surgeon* says, "The

* Surgeon Gerald Molloy.

AUSTRALIAN STATION.



"The four cases of this disease occurred at Wellington soon after our arrival from Sydney, on the 1st of October. Only one was of any importance, having rose-coloured spots and a tendency to diarrhoea. The other three cases occurred at the same time and presented the same symptoms, viz., vomiting, purging, and a loaded tongue, but an emetic given at once seemed to check its further progress. I have no doubt these cases were caused by the use of impure water, which at that time was obtained from a stream that runs at the back of the town, in which people bathe and wash clothes, and into which drains open. Latterly the supply has been obtained from the Government tank, which is supplied by a stream running direct into it from the hills. Since then there has not been another case."

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Class I.
Sect. A.

There were two cases of enteric fever in the Rosario, but the returns from this ship are so defective, that but little information is to be obtained in connection with them. One of them proved fatal, and in that instance the man was placed on the sick-list on the 10th of August complaining of headache and loss of appetite. The skin was hot and dry, and the tongue furred. These symptoms increased until the 25th, when partial delirium set in; the skin became mottled, the tongue red at the edges, there was tenderness of the abdomen, diarrhoea, and all the symptoms of enteric fever. In this condition he was discharged to the Military Hospital at Sydney, where he died on the 29th, the nineteenth day after seizure. Enteric fever was prevalent in Sydney at the time, owing, it is said, to the continued dry weather and consequent want of water to flush the sewers, which were very offensive.

Simple Continued Fever.—Of this form of fever twelve cases were entered on the sick-list, eleven of which occurred in the Blanche and one in the Virago. No information is given in connection with the cases occurring in the Blanche, but they appear to have been mild; the case in the Virago was only of one day's duration.

Remittent Fever.—Eleven cases of remittent fever occurred in the squadron during the year, all of them in the Virago. The surgeon* of the vessel makes the following observations in connection with them: "In making a few remarks on the occurrence of diseases met with and treated during the year, the febrile class stand in the first rank of importance, and deserve the first attention. We may dismiss the single case of simple continued fever, and an old case of ague, and remark only on the remittent, malarial type of fever. During the latter part of 1868 the malady had shown itself among the crew, and six men had been attacked on the voyage north to New Guinea, and the return voyage through the same seas was productive of a greater amount. It was singular that in the first voyage made by the ship through the same parts of the Coral Sea,—inside the Great Barrier reef, and along the coast of the

* Surgeon Alexander Crosbie, M.D.

Australian
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Class I.
Sect. A.

the mainland as far as Cape York, in the end of 1867 and beginning of 1868, during the same season and exposed to the same external conditions, only a single case of remittent fever should have occurred. Possibly the fine robust health of a crew recently arrived from England withstood the malarial poison, or the season may have been an anti-febrile one. For here, as in all malarious localities, where endemic fevers are engendered, the production and concentration of miasmata may vary from year to year, depending upon conditions but little understood, but apparent in their effects to all. The wide-spread disease of one year may be followed by the entire exemption of the one following. That this coast has been generally considered free from malaria, and held to be very healthy, may perhaps be owing to the circumstance last noted—may have been visited in a non-malarious season or year. Our experience contradicts the assertion that it is a healthy coast, and proves indubitably by facts, that unhealthy seasons occur here, as in all places within or near the tropics where the conditions exist for the production of malaria. Surely where there are large tracts of mangrove swamps, long reaches of low wooded land, miles of sandy grass-covered coast, high wooded hills and ridges, with narrow close ravines and low valleys, with rivers all but swamps or waterholes for six months of the year, all sweltering under a hot sun, with abundance of decaying vegetation everywhere, and when the tides retire to leave the muddy shores fermenting in the heat; where all these various tracts are exposed for nearly four months of the year to frequent rains—these conditions must produce malaria—have produced it at all times, and will continue to produce it, for all the necessities are here, and the laws of Nature are immutable. There can be no denial, however, of the small production of malaria in proportion to the conditions capable of generating it. Nowhere in the world are these conditions so abundant, and yet there can be seen in Northern Queensland, towns placed in localities which in the West Indies would be utterly uninhabitable by white men. No attention seems to have been given to the sanitary conditions of the locality where they were founded, and large swamps seem to have attracted the first settlers. Of these, Port Denison, Cardwell, and Gladstone are well-known instances, and yet I am not aware that they suffer from remittent fevers to any great extent, though I have learned that a season seldom passes without a few cases of what the natives call 'low fever' being met with. The climate also of Cape York has been lately extolled by some who have resided there for a time, but the experience gained in this ship is the adverse of considering it a healthy place, at least in the season (hot, rainy), in which for two successive years it was visited. The inconveniences of the first visit can well be recalled, and the great trials we all underwent in the second, are looked back on with disgust by all. Among the white troopers there was not to be found a single man in good or even passable health who had resided for any length of time in the township of Somerset. All were anæmic, debilitated, and incapable of hard day's work, and several showed a scorbutic tendency. It is true that the stay of the ship either time was comparatively short, but there is the strongest conviction that we would have suffered

Australian
Station.

Class I.
Sect. A.

ferred severely had the period been lengthened. It must be taken into account, too, that we were exceptionally placed. The anchorage was within 300 yards of the shore, in the pass between the Island of Albany and Somerset, and was protected in a measure from the prevailing breeze; the N. W. monsoon and the rainy season had just begun; the temperature ranged from 88° to 90° Fahr. in the shade, and the frequent rains necessitated the sloping of the awnings, rendering the air below decks very hot and oppressive. Such an unhappy combination of circumstances told speedily on the health of the crew; debility was apparent in all who came under medical treatment, and although the crew had previously been receding from the healthy standard, here they rapidly deteriorated. I have never seen men so reduced in outward condition, in so short a time, for they seemed to melt away during the twenty-six days of our stay; directly we left, improvement quickly ensued.

“The tendency to disease of a periodic type continued for some time after the arrival of the vessel in New Zealand, induced or augmented by her stay at Gladstone; here she remained for two days (from the 12th to the 14th of April), while coaling in a creek bounded extensively by mangrove swamps, which the recession of the tide left dry and exposed. This exposure was followed by three cases of fever, one of dysentery, and two of diarrhœa, all showing periodic tendency.

“The number of remittent fever cases amounted to eleven; they were all of a mild type, generally well marked, and showing distinct remissions; some were ill defined, and irregular in the symptoms; and one was lengthened, almost continuous. Seizure was often acute, and remission usually took place in the early morning, and continued till late in the afternoon, when the daily exacerbation began, and extended till morning. In a few however there were two exacerbations, one in the morning, the other in the evening, and in a case or two, scarcely discernible alterations in these respects. Indeed, it was sometimes difficult to discriminate between the ill-marked forms of fever and the cases of debility and dyspepsia which occurred at the same time. These cases of fever differed in no respect from those met with, and so frequent in malarious countries in various parts of the world. Quinine was the remedy used; usually in large doses, of from ten to fifteen grains, and repeated once or twice during the remission. This quickly mitigated the exacerbation, and sometimes cut the disease short after the first or second day. Cinchonism was kept up by diminished doses for three or four days, and then discontinued to allow of the advance of convalescence.”

II. General Diseases.—Section B., or Constitutional Group.

Under this head 104 cases of various forms of disease were entered on the sick-list, of which, ten were invalided and one proved fatal. Almost all the invaliding was occasioned by rheumatism and pulmonary consumption.

Class II.
Sect. B.

Rheumatism.—Of this disease there were sixty-five cases, which is in the ratio of 85.5 per 1,000 of force, being a reduction, compared with 384.

B B 4

with

Australian
Station.

Class II.
Sect. B.

with the previous year, equal to 24.9 per 1,000. The average duration of each case was a little over fifteen days. Five persons were invalidated for it, but the returns from the station give very little information connected with the disease.

Syphilis, Primary and Secondary.—Fourteen cases of primary syphilis and fifteen of secondary syphilis were under treatment during the year, the average duration of each case of the former disease being about twenty-six days, and of the latter, twenty-seven days.

There was not a case of either form of syphilitic disease in the Blanche during the year.

In the Challenger there were eight cases of primary and four of secondary syphilis. Most of this disease was contracted at Melbourne during the Lady quarter of the year. The staff surgeon* observes: "The number of cases added to the sick-list, as well as the days' sickness, is considerably in excess of that of the previous quarter. This circumstance is mainly owing to the very severe form of venereal complaints contracted during our short stay at Melbourne in the latter end of the month of December 1868. These syphilitic complaints were more severe in character than any I have previously witnessed on the Australian Station, in several instances being followed by buboes and very obstinate and protracted secondary symptoms. On our arrival at Wellington, one of the venereal patients was so seriously ill that it was deemed necessary to send him on shore to the Civil Hospital, where he remained till the 13th of March, when he rejoined the ship. His health had improved greatly, but it was necessary to continue him on the sick-list for some time."

There were two cases of primary and one of secondary syphilis in the Rosario. The former disease was contracted at Sydney, and the latter was a sequela of one of the cases.

In the Virago there were four cases of primary and ten of secondary syphilis. The surgeon observes: "Primary syphilis was met with four times, in three of which the ulcer was diagnosed at the time, or subsequently, as belonging to the infecting (hard, non-suppurating), and one to the soft suppurating variety. The three former were followed by constitutional symptoms. Of the ten cases of secondary syphilis, three presented no history or trace of primary disease, five followed primary at various intervals, and two consisted of relapsing symptoms, which had appeared at various times; for a period of three years in one; and two or three times within three months in the other. Six presented condylomata, anal or scrotal, with induration of the inguinal and cervical glands, and with scaly psoriatic eruptions; one, falling-off of the hair, with discoloration of the integument; one, iritis; one, psoriasis guttata; and one an eruption of lichen. The period occupied in the treatment varied from a fortnight to two months on the sick-list, though it was continued as long as the eruption remained, when the patient was discharged

Staff Surgeon Alex. Watson, M.D.

discharged from the list to light duty; as long, sometimes, as four months. The bichloride of mercury was the remedy employed, in doses of an eighth or a sixth of a grain, twice and then thrice a day, in solution, and in no case was ptyalism induced, though digestive disorder sometimes followed. Improvement slowly but surely took place, and the cachectic appearance of constitutional syphilis was slowly displaced by a better and healthier, though paler hue. Iodide of potassium, with carbonate of ammonia and tartarised iron, occasionally displaced, and always succeeded the mercurial, with great and abiding benefit."

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Class II.
Sect. B.

III. Diseases of the Nervous System and Organs of the Special Senses.

Forty-two cases of various forms of disease appear under this head, of which six were invalided and two proved fatal. Of the fatal cases, one was the result of apoplexy, the other of paralysis.

Class III.

Apoplexy.—The only case of apoplexy in the squadron occurred in the person of a stoker of the Challenger, and proved fatal. An epitome of its history is thus given by the surgeon* of the vessel: "A case of apoplexy in a stoker occurred during this visit to Sydney (13th December 1869). He had been to the "Head" at 2h. p. m., the sun at the time being very hot; he was ordered to leave it, by the officer of the watch. He did not move for some time, and when he did was unable to adjust his clothes. He had been on the sick-list frequently in this ship, suffering from syphilitic nodes and irregularity of the bowels. He had a fainting fit when taken to the sick bay. His face was pale; pulse slow, but full; when he came to, he complained of pain in the head and cervical vertebræ. He expressed himself as much better after this, but on the morning of the 15th of December, suddenly his breathing was heard to become stertorous (he had been talking to his attendant an hour before), and he was found to be totally insensible. Toward the close of life (he never rallied nor became conscious) his breathing became obstructed with mucus, and he moaned frequently. The pulse rose to 112. A post-mortem examination of the body showed rupture of the basilar artery, with effusion of blood on the pons varolii and base of the cerebellum, a clot resting on about the origin of the ninth pair of nerves. There was a small clot in the tube of the basilar artery, in front of the rupture, of a pale yellow colour, which seemed to be fibrine; but the artery was thin in its walls, and it (the clot) seemed a portion of the wall of the artery that had been, as it were, doubled back on itself, and then coated with fibrinous deposit from the blood."

Diseases of the Eye.—Eleven cases of affections of the eyes were under treatment; four in the Blanche, and seven in the Virago. Of those in the Blanche, three were cases of simple ophthalmia; the fourth, a case of choroiditis. Of the cases in the Virago, the surgeon

* Surgeon Daniel Finncane, M.D.

Australian
Station.

Class III.

geon observes: "The ophthalmic cases were, with perhaps one exception, referable to inflammation of the conjunctiva, and occurred in the month of March, at Port Denison, in Queensland, where the ship remained from the 11th of February to the 17th of March, and where leave was given. The disease was endemic there at the time. It is usually called "the sandy blight" by the people, and prevails during the hottest time of the year; and also, as far as I have observed, chooses weak anæmic subjects, much below the standard of health. With us the disorder was slight, and never proceeded beyond the catarrhal stage, never became purulent. A strong solution of alum was found to be the best local collyrium."

IV. Diseases of the Circulatory System.

Class IV.

Under this head there were only three cases of functional derangement of the heart. They were of no consequence. The average duration of each case was fifteen days.

V. and VI. Diseases of the Absorbent System and Ductless Glands.

Classes
V. and VI.

This group was only represented by three cases of sympathetic bubo. The average duration of each case was a little over sixteen days.

VII. Diseases of the Respiratory System.

Class VII.

One hundred and ninety-nine cases of various forms of disease were entered on the sick-list under this head, 187 of which were examples of ordinary catarrh. The average duration of each case of catarrh was between five and six days. Apart from the number of days the men were incapacitated for duty, the loss to the service from these affections was limited to the invaliding of one man for asthma.

VIII. Diseases of the Digestive System.

Class VIII.

Under this head 256 cases of disease were entered on the sick-list, of which two were invalided. Of the total number, 144 were cases of diarrhoea of greater or less severity. They appear, however, to have been of trifling importance, as the medical officers make little or no allusion to them; and the average duration of each case was only three or four days. In the Blanche, in which there were twenty cases, the majority of them occurred in the beginning of October, when the vessel was lying in Wellington Harbour, and they were supposed to be owing to the use of impure drinking water.

The other diseases which appear in this class do not call for any comments.

IX. and X. Diseases of the Urinary and Generative Systems.Australian
Station.

Forty-four cases of various forms of disease appear under this head, of which thirty-four were cases of gonorrhœa. Each case of this disease averaged twelve days on the sick-list. No loss of service by invaliding or death occurred from this class of diseases.

Classes IX.
and X.

All the cases of orchitis were of that form designated epididymitis, being the result of gonorrhœal irritation.

XI. Diseases of the Organs of Locomotion.

Only one case appears on Table I. under this head ; but two are returned as invalided. The apparent discrepancy arises from one of the men having been entered on the sick-list under a different heading. The case referred to above was one of synovitis of the right knee-joint, occurring in a Marine who had been injured by falling from a height of eight or nine feet, while cleaning a window in barracks. He was repeatedly under treatment for chronic swelling and effusion into the joint, and, as it became apparent that he would never be fit for the active duties of the corps to which he belonged, he was brought before a board of surveying officers and invalided from the service.

Class XI.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Three hundred and forty-eight cases were entered on the sick-list under this head, of which 341 were cases of phlegmon and abscess, and ulcer. One case of ulcer was invalided. The subject of it, a seaman of the Rosario, had for nearly a year been under observation and treatment for varicose ulceration of the extremities, which had resisted every effort to effect its cure. That was indeed the only case of any importance in this class of diseases. Each case of phlegmon and abscess was, on an average, between eight and nine days under treatment; and each case of ulcer rather over eighteen days.

Classes XII.
and XIII.**Unclassed Diseases.**

Only ten cases appear under this head, of which two of debility were invalided.

Delirium Tremens.—Of the two cases of this disease entered on the sick-list, one occurred in a leading seaman, the other in an able seaman.

Poisoning.—One case of alcoholic poisoning occurred in the person of a seaman of the Challenger. It was of a mild character.

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Wounds and Injuries.

With the exception of two cases of drowning and one of suicide, there were no fatal casualties during the year. The man who committed suicide jumped overboard and was drowned; and of the other two cases, one was found drowned and the other fell overboard.

The total number of deaths in the force was seven, which is in the ratio of 9·2 per 1,000, being a reduction, compared with the preceding year, equal to ·4 per 1,000.

Invalided.

From General Diseases, Section B., ten persons were invalided; viz., five for rheumatism; one for scrofula; and one for phthisis pulmonalis; six for disease of the nervous system and organs of the special senses; one for diseases of the respiratory system; two for diseases of the digestive system; two for diseases of the organs of locomotion; one for diseases of the cellular tissue and cutaneous system; two for unclassified diseases; and one for wounds and injuries. The total number invalided was twenty-five, which is in the ratio of 32·8 per 1,000, being an increase, compared with the preceding year, equal to 2·4 per 1,000.

TABLE, No. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A :						
Enteric Fever - - -	6	7·8	—	—	1	1·3
Simple Continued Fever -	12	15·7	—	—	—	—
Ague - - - -	4	5·2	—	—	—	—
Remittent Fever - - -	11	14·4	—	—	—	—
Erysipelas - - - -	1	1·3	—	—	—	—
II. General Diseases, Section B :						
Rheumatism - - - -	65	85·5	5	6·5	—	—
Gout - - - -	1	1·3	—	—	—	—
Syphilis { Primary - - -	14	18·4	—	—	—	—
{ Secondary - - -	15	19·7	—	—	—	—
Tumour, Cystic - - -	1	1·3	—	—	—	—
Scrofula - - - -	2	2·6	1	1·3	—	—
Phthisis Pulmonalis - -	6	7·8	4	5·2	1	1·3
III. Diseases of the Nervous System and Organs of the Special Senses :						
Apoplexy - - - -	1	1·3	—	—	1	1·3
Sunstroke - - - -	10	13·1	—	—	—	—
Paralysis - - - -	—	—	—	—	1	1·3
Vertigo - - - -	2	2·6	1	1·3	—	—
Epilepsy - - - -	6	7·8	2	2·6	—	—
Neuralgia - - - -	4	5·2	1	1·3	—	—
Insanity - - - -	3	3·9	1	1·3	—	—
Diseases of the Eye - -	11	14·4	1	1·3	—	—
Diseases of the Ear - -	5	6·5	—	—	—	—
IV. Diseases of the Circulatory System :						
Disease of the } Functional - -	3	3·9	—	—	—	—
Heart - - - -						

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - - -	3	3·9	—	—	—	—
VII. Diseases of the Respiratory System:						
Catarrh - - - - -	187	246·	—	—	—	—
Hæmoptysis - - - - -	1	1·3	—	—	—	—
Asthma - - - - -	3	3·9	1	1·3	—	—
Other Diseases of the Lungs -	8	10·5	—	—	—	—
VIII. Diseases of the Digestive System:						
Cynanche - - - - -	52	68·4	—	—	—	—
Dyspepsia - - - - -	55	72·3	1	1·3	—	—
Dysentery - - - - -	3	3·9	—	—	—	—
Diarrhœa - - - - -	114	150·	—	—	—	—
Colic and Constipation - -	23	30·2	—	—	—	—
Hæmorrhoids - - - - -	3	3·9	—	—	—	—
Hernia - - - - -	1	1·3	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	5	6·5	1	1·3	—	—
IX. & X. Diseases of the Urinary and Generative Systems:						
Disease of the Kidneys - -	1	1·3	—	—	—	—
Diseases of the Bladder - -	3	3·9	—	—	—	—
Gonorrhœa - - - - -	34	44·7	—	—	—	—
Stricture - - - - -	2	2·6	—	—	—	—
Orchitis - - - - -	14	18·4	—	—	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c. - - - - -	1	1·3	2	2·6	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	231	303·0	—	—	—	—
Ulcer - - - -	110	144·7	1	1·3	—	—
Erythema - - - -	3	3·9	—	—	—	—
Diseases of the Skin - -	4	5·2	—	—	—	—
Unclassed:						
Debility - - - -	7	9·2	2	2·6	—	—
Delirium Tremens - - -	2	2·6	—	—	—	—
Poisoning - - - -	1	1·3	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. -	357	469·7	1	1·3	—	—
Burns and Scalds - - -	10	13·1	—	—	—	—
Submersion and Drowning -	4	5·2	—	—	2	2·6
Suicide - - - -	—	—	—	—	1	1·3
TOTALS - - -	1,425	1,875·	25	32·8	7	9·2

TABLE, No. 2.

SHOWING the Number of Days' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Enteric Fever - - -	49	4	53	·1	·1
Simple Continued Fever -	82	51	133	·3	·3
Ague - - - - -	17	-	17	—	—
Remittent Fever - - -	197	-	197	·5	·6
Erysipelas - - - -	31	-	31	—	—
II. General Diseases, Section B.:					
Rheumatism - - - -	758	226	984	2·6	3·4
Gout - - - - -	9	-	9	—	—
Syphilis { Primary - - -	366	-	366	1·	1·2
{ Secondary - - -	409	-	409	1·1	1·4
Tumour, Cystic - - -	3	-	3	—	—
Scrofula - - - - -	50	-	50	·1	·1
Phthisis Pulmonalis - -	208	283	491	1·3	1·7
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - - -	5	-	5	—	—
Sunstroke - - - - -	36	-	36	—	—
Vertigo - - - - -	102	-	102	·2	·2
Epilepsy - - - - -	153	107	259	·7	·9
Neuralgia - - - - -	119	-	119	·3	·3
Insanity - - - - -	112	-	112	·3	·3
Diseases of the Eye - -	189	-	189	·5	·6
Diseases of the Ear - -	93	-	93	·2	·2
IV. Diseases of the Circulatory System:					
Disease of the Heart, Functional.	45	-	45	·1	·1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*cont^d*.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
V. & VI. Diseases of the Absorbent System and Ductless Glands :					
Bubo (<i>Symp.</i>) - - - -	40	- -	40	·1	·1
VII. Diseases of the Respiratory System :					
Catarrh - - - - -	1,071	- -	1,071	2·9	3·8
Hæmoptysis - - - - -	5	- -	5	—	—
Asthma - - - - -	30	- -	30	—	—
Other Diseases of the Lungs -	146	22	168	·4	·5
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	375	- -	375	1·	1·2
Dyspepsia - - - - -	297	20	317	·8	1·
Dysentery - - - - -	75	- -	75	·2	·2
Diarrhœa - - - - -	512	- -	512	1·4	1·8
Colic and Constipation - -	102	- -	102	·2	·2
Hæmorrhoids - - - - -	11	- -	11	—	—
Hernia - - - - -	1	- -	1	—	—
Other Diseases of the Stomach, Intestines, &c. - - - -	44	- -	44	·1	·1
IX. & X. Diseases of the Urinary and Generative Systems :					
Diseases of the Kidneys -	3	- -	3	—	—
Diseases of the Bladder -	40	- -	40	·1	·1
Gonorrhœa - - - - -	409	- -	409	1·1	1·4
Stricture - - - - -	45	- -	45	·1	·1
Orchitis - - - - -	209	- -	209	·5	·6
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones, Joints, &c. - - - - -	31	- -	31	—	—

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - -	1,960	27	1,987	5.4	7.1
Ulcer - - - - -	2,002	25	2,027	5.5	7.2
Erythema - - - - -	39	- -	39	.1	.1
Diseases of the Skin - -	82	- -	82	.2	.2
Unclassed :					
Debility - - - - -	340	- -	340	.9	1.1
Delirium Tremens - -	9	- -	9	—	—
Poisoning - - - - -	2	- -	2	—	—
Wounds and Injuries :					
Wounds, Injuries, &c. - -	3,529	149	3,678	10.	13.1
Burns and Scalds - - -	143	- -	143	.3	.3
Submersion and Drowning -	4	- -	4	—	—
TOTALS - - -	14,613	914	15,527	42.5	55.9

TABLE, No. 3.

SHOWING the Number INVALIDED from each Ship on the AUSTRALIA STATION.

CAUSE OF INVALIDING.	Blanche.	Challenger.	Rosario.	Virago.	Total.
II. General Diseases, Section B.:					
Rheumatism - - - - -	2	2	1	-	5
Scrofula - - - - -	-	-	-	1	1
Phthisis - - - - -	-	2	1	1	4
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Vertigo - - - - -	-	1	-	-	1
Epilepsy - - - - -	-	1	-	1	2
Neuralgia - - - - -	-	1	-	-	1
Insanity - - - - -	-	1	-	-	1
Choroiditis - - - - -	1	-	-	-	1
VII. Diseases of the Respiratory System:					
Asthma - - - - -	-	1	-	-	1
VIII. Diseases of the Digestive System:					
Dyspepsia - - - - -	1	-	-	-	1
Sea Sickness - - - - -	1	-	-	-	1
XI. Diseases of the Organs of Locomotion:					
Diseases of Bones, Joints, &c. - - -	-	2	-	-	2
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Ulcer - - - - -	-	-	1	-	1
Unclassed:					
Debility - - - - -	-	2	-	-	2
Wounds and Injuries:					
Wound - - - - -	-	1	-	-	1
TOTAL - - -	5	14	3	3	25

TABLE, No. 4.

SHOWING the Number of DEATHS in each Ship employed on the AUSTRALIAN STATION.

CAUSE OF DEATH.	Blanche.	Challenger.	Rosario.	Virego.	TOTAL.
I. General Diseases, Section A.:					
Enteric Fever - - - - -	-	-	1	-	1
II. General Diseases, Section B.:					
Phthisis - - - - -	-	-	-	1	1
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - - -	-	1	-	-	1
Paralysis - - - - -	-	1	-	-	1
Wounds and Injuries:					
Drowned - - - - -	1	1	-	-	2
Suicide - - - - -	-	(a) 1	-	-	1
TOTAL - - -	1	4	1	1	7

(a) By drowning.

TABLE, No. 5.

SHOWING the Number of CASES of all DISEASES and INJURIES in the Ships employed
on the AUSTRALIAN STATION.

DISEASE OR INJURY.	Blanche.	Challenger.	Rosario.	Virgo.	Total.
I. General Diseases, Section A.:					
Enteric Fever - - - -	4	-	2	-	6
Simple Continued Fever - - - -	11	-	-	1	12
Ague - - - -	2	-	1	1	4
Remittent Fever - - - -	-	-	-	11	11
Erysipelas - - - -	-	-	1	-	1
II. General Diseases, Section B.:					
Rheumatism - - - -	12	42	6	5	65
Gout - - - -	-	-	1	-	1
Syphilis {Primary - - - -	-	8	2	4	14
{Secondary - - - -	-	4	1	10	15
Tumour Cystic - - - -	-	1	-	-	1
Scrofula - - - -	-	-	-	2	2
Phthisis Pulmonalis - - - -	-	3	1	2	6
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - -	-	1	-	-	1
Sunstroke - - - -	-	-	10	-	10
Vertigo - - - -	-	2	-	-	2
Epilepsy - - - -	-	5	-	1	6
Neuralgia - - - -	-	3	-	1	4
Insanity - - - -	-	3	-	-	3
Diseases of the Eye - - - -	4	-	-	7	11
Diseases of the Ear - - - -	1	1	1	2	5
IV. Diseases of the Circulatory System:					
Disease of the Heart, Functional - -	-	-	3	-	3
V. & VI. Diseases of the Absorbent Sys- tem and Ductless Glands:					
Bubo (<i>Symp.</i>) - - - -	1	2	-	-	3
VII. Diseases of the Respiratory System:					
Catarrh - - - -	21	81	39	46	187
Hæmoptysis - - - -	-	1	-	-	1
Asthma - - - -	-	1	-	2	3
Other Diseases of the Lungs, &c. - -	1	4	-	3	8

TABLE, No. 5.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Blanche.	Challenger.	Rosario.	Virego.	TOTAL.
VIII. Diseases of the Digestive System :					
Cynanche - - - - -	10	14	2	17	52
Dyspepsia - - - - -	5	15	33	2	55
Dysentery - - - - -	—	1	—	2	3
Diarrhœa - - - - -	20	40	35	10	114
Colic and Constipation - - - - -	2	14	6	1	23
Hæmorrhoids - - - - -	—	—	3	—	3
Hernia - - - - -	—	—	—	1	1
Other Diseases of the Stomach, &c. - - - - -	5	—	—	—	5
IX. & X. Diseases of the Urinary and Generative Systems :					
Diseases of the Kidneys - - - - -	—	1	—	—	1
Diseases of the Bladder - - - - -	—	3	—	—	3
Gonorrhœa - - - - -	1	15	11	7	34
Stricture - - - - -	1	—	—	1	2
Orchitis - - - - -	2	11	1	—	14
XI. Diseases of the Organs of Locomotion :					
Diseases of the Bones - - - - -	—	1	—	—	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :					
Phlegmon and Abscess - - - - -	47	90	59	35	231
Ulcer - - - - -	28	33	10	39	110
Erythema - - - - -	1	2	—	—	3
Diseases of the Skin - - - - -	—	1	1	2	4
Unclassed :					
Debility - - - - -	—	5	2	—	7
Alcoholic Poisoning - - - - -	—	1	—	—	1
Delirium Tremens - - - - -	—	—	—	2	2
Wounds and Injuries :					
Wounds, &c. - - - - -	90	129	62	76	357
Burns and Scalds - - - - -	5	—	2	3	10
Submersion and Drowning - - - - -	2	2	—	—	4
TOTALS - - -	285	540	295	305	1,425

TABLE, No. 6.

SHOWING the Names of the Ships; the Average Complements, &c.; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily in each Ship; and the Number Discharged to Hospital.

Rate, &c.	NAMES of SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	PERIOD.	Average Complements.	Average Complements Corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
C Sixth Rate	Blanche	-	15 Jan. 1868	6	1,268	S. 350	Year	165	165	285	3,316	9	54.5	2
	Challenger	-	12 April 1866	16	1,462	S. 400	Year	300	300	540	5,645	15.4	51.3	5
Sloop	Rosario	-	28 Sept. 1867	3	673	S. 150	Year	120	120	295	2,282	6.1	50.8	4
	Virago	-	1 Dec. 1866	6	1,059	P. 220	Year	175	175	305	3,436	9.4	53.7	3

C C 4

IRREGULAR FORCE.

Irregular Force.

THERE were fifty-six vessels in the Irregular Force during the year 1869; viz., ten of the fourth rate; thirteen of the sixth rate; five sloops; twelve gun-vessels; one steam-vessel; seven troop-ships; two store ships; five unclassified ships; and one floating dock, for service at Bermuda. The returns from ten of the vessels only, were for the whole year; from the remainder they were for periods varying from a few days to over eleven months. The mean force corrected for time was 7,450, and the total number of cases of disease and injury entered on the sick-list 10,024, which is in the ratio of 1345·5 per 1,000 of force, being an increase compared with the preceding year, but only to the extent of 3·9 per 1,000; of these 199 were invalided, and sixty proved fatal, the former being in the ratio of 26·7, and the latter of 8· per 1,000. Compared with 1868 there was an increase in the invaliding rate to the extent of 3·6, and in the death rate of ·5 per 1,000.

The average daily loss of service from General Diseases, Section A., Febrile Group, was in the ratio of 1·7 per 1,000; from Section B., or Constitutional Group, 11·3; from diseases of the nervous system, and organs of the special senses, 1·2; from diseases of the circulatory system, ·4; of the absorbent system, and ductless glands, ·8; of the respiratory system, 3·6; of the digestive system, 3·4; of the urinary and generative systems, 3·6; of the organs of locomotion, ·4; of the cellular tissue and cutaneous system, 10·6; from unclassified diseases, ·5; and from wounds and injuries of various kinds, 5·7. The average number of men sick daily was 348·6, which is in the ratio of 46·7 per 1,000 of force, being a decrease compared with the preceding year, equal to 8·6 per 1,000.

I. General Diseases.—Section A., or Febrile Group.

Class I. Sect. A.

Under this head, 362 cases of various forms of disease were entered on the sick-list, eight of which proved fatal. They occasioned no loss to the service by invaliding. Of the total number, two were cases of vaccinia; two of scarlet fever; eight of measles; six of enteric fever; 221 of simple continued fever; twelve of yellow fever; thirty-one of ague; forty-six of remittent fever; one of cholera; ten of mumps; eight of influenza; and fifteen of erysipelas.

Scarlet Fever.—A single case of this form of fever occurred in the person of a boy of the Cossack, who appears to have contracted the

the disease at Trincomalie, where it was prevalent at the time. The case was of some severity, but he ultimately did well.

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Sect. A.

There was a case of scarlet fever in the Simoom. It occurred in the person of an officer of the ship who had contracted the disease when on leave, at his residence at Southsea, where that form of fever was prevalent at the time, and some members of his family had been suffering from it. He was not allowed to come on board the ship, but was treated on shore, and afterwards granted leave so as to ensure, as far as possible, that he should not bring the infection on board with him.

Measles.—There were eight cases of this form of eruptive fever in the Force during the twelve months, viz., two in the Liffey; two in the Liverpool; two in the Orontes; one in the Revenge; and one in the Serapis.

With regard to Table II, in reference to this Force, it is necessary to explain that the days' sickness therein allotted to the cases of disease is not to be considered as the sickness resulting from these cases, but must rather be regarded as the balance of days' sickness not accounted for on other stations, but which must be taken in order that the Total Force may be complete.

Enteric Fever.—Single cases of this form of fever occurred in the Donegal, Endymion, Espoir, and Megæra. In the Liffey there were two cases. The case in the Espoir proved fatal. It occurred in the person of a warrant officer who was placed on the sick-list on the 20th of November, when the vessel was at sea, on her passage to Bermuda. He had been ailing, he said, for four days previously; he complained of severe headache, pains in his bones, and general weakness. Severe vomiting set in on the 23rd, which continued with only slight intermissions until the 2nd of December, when he was discharged to Bermuda Hospital. On the 30th of November the characteristic eruption of enteric fever presented itself over the abdomen. He had at this time much thirst, anorexia, and sleeplessness, aggravated by a severe cough, with expectoration of sputa tinged with blood. "On his admission into hospital," the Deputy Inspector General* says, "he chiefly complained of weakness and general malaise. The pulse was 104, small and weak; skin acting; tongue very foul; bowels confined for several days; abdomen soft and flaccid; no spots observable; cannot retain anything upon his stomach. During the period of his treatment in hospital, his stools, on his bowels being first moved by a mild cathartic, were dark, watery, and tinged with bile; afterwards they assumed more of a slate colour, and were generally scanty. The more prominent symptoms were those of the lung complication; pain in the side; cough; expectoration tenacious, and tinged red. Temperature varied from 101°·6 to 103°. Towards the end he got delirious; abdomen

* Deputy Inspector General Thomas Nelson, M.D.

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domen highly tympanitic and painful on pressure; pulse failing. He gradually sank, and died at 5h. 26 p.m. of the 19th of December.

"Autopsy, fifteen hours after death.—*Body*, emaciated; cadaveric rigidity. *Right lung*, eighteen ounces; crepitant, floated; slightly congested. *Left lung*, twelve ounces; bright red colour, and congested; blood-red serum exuding from cut surface. *Pleura* healthy, no fluid. *Heart*, ten ounces, flabby and pale; clots in both ventricles; right ventricle dilated. *Abdomen*. On penetrating the peritoneum a large quantity of fetid gas escaped. Peritoneum smooth, containing a small quantity of pus, free in the cavity. *Liver*, three pounds, and healthy. *Intestines*. The whole of the small intestine highly congested; leashes of vessels running from the mesentery to the bowels; perforation existed about two and a half feet from the ileo-cæcal valve, and the whole of the intestine was of a port wine colour. The whole of the ileum and the ileo-cæcal valve were one mass of ulceration, covered with dark ragged sloughs; Peyers patches were completely ulcerated, the ulcers varying from the size of a pea to that of a shilling, of irregular shape, and with sharp bright coloured edges, with yellow sloughs separating, and it was in an ulcer in this state in which the perforation occurred; mesenteric glands enlarged and infiltrated; other organs healthy."

Simple Continued Fever.—There is little or nothing to be said in connection with the cases of this type of fever which were entered on the sick-list. There were altogether 221 cases, which were tolerably equally distributed over the Force. They caused no loss to the service either by invaliding or death.

Yellow Fever.—Twelve cases of this fatal form of fever occurred in the force, of which five proved fatal. There were single cases in the Barrosa and Lapwing, three in the Malacca, and seven in the Ragoon.

The history of the case in the Barrosa is thus given by the surgeon* of the ship:—"One case of yellow fever, which ended fatally, occurred in a boy eighteen years of age, soon after leaving Rio de Janeiro. The patient in this case was one of the cutter's crew, and went to the shore in his boat, on the evening of the 23rd of August, and while the boat was at the landing place at Rio, he ran away, evidently with the intention of deserting, for it afterwards turned out that he went round to the harbour where the merchant shipping lie, and spent the night on board a brig. As these particulars were not obtained until after the disease had made its appearance, and when we were at sea, it was impossible to find out whether the fever had actually prevailed in the brig on board of which he slept, or not; but while at Rio I was told that a few cases were occurring now and then among the merchant seamen, and that two cases, one of which ended fatally, had been sent from the Egmont to the hospital on shore for treatment. The boy was picked

* Surgeon William Anderson (a).

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picked up and brought off to the ship on the following day, the 24th, and on the morning he presented himself with symptoms of the disease. When the nature of the disease was ascertained he was removed from the sick bay in which he had had his hammock, and shifted into a cot which, as we were at this time under sail, was hung over the engine-room grating and enclosed by a canvas screen, the only means of separation from the ship's company that could be adopted. The place is airy, with a large hatchway overhead, which could be opened or closed as required, with a free current of air from the engine-room and stoke-hold below. Three volunteers were told off to look after him in turn, night and day, and in the performance of this duty they were most careful and watchful. A solution of carbolic acid was kept frequently sprinkled about inside the screen and on the deck round it outside. It was also freely used in the vessels in which he vomited, and in the urinals and night stools.

"In the treatment, I chiefly depended upon moselle, brandy, and effervescing draughts, with sinapisms to the epigastrium to relieve the vomiting; while, at the same time, he was supported by beef tea, arrowroot, and any nourishment he could take. I tried carbolic acid in the hope that it would alter the secretions of the stomach, and perhaps relieve the vomiting, and it appeared for a short time to act satisfactorily, but, as the result proved, it was only for a short time. I should, however, from what I observed in this case, be inclined to try it again in another, earlier in the disease, should I have an opportunity of treating one. No post-mortem examination was made owing to the inconvenience of performing it in a ship of this class. Fortunately for us we were running south at the time, and daily getting into a colder temperature, and the disease, I am happy to say, did not spread. (While at Rio the temperature was 74° in the shade, and on the 4th of September, when approaching Monte Video, it was 64°.) One of the midshipmen, however, was put on the sick-list three days after this patient died, with symptoms of fever which appeared to take on the remittent type. There was in this case slight delirium and other peculiar symptoms which led me to believe, that had he remained in a warm latitude, they would have developed themselves into yellow fever. The gun-room is immediately opposite the engine-room hatchway where the patient was enclosed. One of the attendants also was under treatment for a few days with febricula, but the symptoms were of a very mild nature."

The history of the case which occurred in the *Lapwing* is also instructive. It is thus given by the medical officer* of the ship: "The ship left Port Royal on the 13th of September for Nassau, touching at Inagua on the 16th, where a stay of only a few hours was made, and arriving at Nassau on the 20th. Soon after our arrival it was ascertained that an epidemic of yellow fever was prevalent on shore during the Midsummer quarter, and since; four of the officers of a detachment of the 2nd West India Regiment, and several of the civil population, having succumbed to the malady.

Precautions

* Assistant Surgeon Denis O. Mc Carthy.

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Precautions to prevent the spread of the disease to the ship were accordingly adopted. Leave was withheld from the ship's company, none save the officers and stewards being allowed to land. I am informed by a resident practitioner that the island was perfectly healthy until the arrival of the Eclipse in July, when the first case occurred, which terminated fatally, the subject being her commanding officer, who died on shore after a brief illness.

"A case of mild ephamera was entered on the sick-list on the 20th, the day after our arrival; the patient, a Marine, was discharged to duty on the third day. A case which has been returned as remittent, on account of its not presenting features of such gravity as to warrant the classing it under the head of the more malignant disease, occurred on the 27th, in the person of a petty officer, who had been employed in the dockyard. When he came on board he was suffering from acute frontal headache, nausea, epigastric tenderness, and rachialgia. The eyes were suffused and deeply injected, the skin dry and parched, and there was pyrexia. This case terminated favourably, and was discharged on the seventh day.

"Notwithstanding the unsatisfactory state of the bilges, which at times smelled most offensively, despite of all endeavours to render them clean and inodorous by repeated cleaning and the liberal and unrestricted use of carbolic acid, the sanitary condition of the ship continued excellent. No other case of fever occurred until the 14th of October; for three days previous to that date the sick-list was blank. Since our arrival at Nassau the weather had been fine, the thermometer ranged from 76° to 84° Fahrenheit; barometers averaged from 29·90 to 30·20; and the prevailing winds E. and N. E.

"On the morning of the above named day, an officer felt unwell. He complained of rachialgia, deep seated pain of the orbits and frontal sinuses, nausea, and epigastric uneasiness. The conjunctivæ were deeply injected, the skin was dry and burning, the tongue loaded in the centre, red at the tip and edges. The pulse 96, slow and full. Traces of albumen in the urine were noticed on the evening of the 15th; next day it was more copious; the tongue resembled raw beef in appearance, and slight hæmorrhage from the gums was observed; hiccough and suppression of urine set in on the fourth day. He was removed to sick quarters on the 18th at noon, where he expired at 3h. 30 p.m. on the following day, during a violent attack of hæmorrhage from the stomach and bowels, the intellect remaining unimpaired almost to the last moment.

"As to the origin of the disease there cannot be a doubt that it was contracted on shore on the 9th of October, when the officer landed. From the commencement of the attack every precaution was adopted to prevent its spread. The patient was placed in a cot on deck, aft, beneath a screen, and isolated as completely as possible, none but the sick attendants being permitted to approach him.

"On the 20th another case of fever occurred. The patient, a corporal of the Royal Marine artillery, was attacked in the evening with vomiting, back and limb pains, frontal headache and epigastric tenderness. The skin was dry and pungent, and the eyes yellowish and

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and injected. I may observe that while the case of the officer has been entered and reported as a case of yellow fever, that of the corporal appears as remittent fever. They were, however, I am now inclined to believe, identical in their origin, symptoms, and course; and differing in no respect, except their termination, the Marine being convalescent on the fourth day and able to resume light duty on the 26th of October. No other case I am happy to say occurred, except one of primary fever, which from its mildness and short duration I have classed under the head of febricula.

“ Until the end of October yellow fever continued to occur in sporadic cases, when on the approach of the cool season, it subsided altogether in Nassau.”

During the time the *Malacca* was in the Irregular Force, three cases of yellow fever occurred on board, one of which, in the person of an officer, proved fatal on the sixth day. The disease was contracted at Rio de Janeiro, which place the vessel touched at on the homeward voyage, and where yellow fever prevailed at the time. There were no points of special interest in the case, excepting perhaps the fact that none of the persons affected had been out of the ship while she lay in Rio Harbour.

There were seven cases of yellow fever in the *Racoon*, of which one proved fatal. The history of this outbreak is very interesting, and is thus given by the surgeon* of the ship: “ Under this head it will be observed that seven cases were placed on the sick-list, of whom one, a young officer, died. The ship having lain at Port Royal, Jamaica, from the 25th of November to the 7th of December, left that day for Port-au-Prince. The patient was seized on the 8th with an acute febrile paroxysm. There were no rigors, but the severity of the usual symptoms was most marked; the lumbar and rachitic pain, headache, constipation, &c. I had him placed in a cot and isolated at once, and on the following day (the 9th) I expressed a decided opinion as to the nature of the attack. The captain's main deck fore, and after cabins, were fortunately available for a quarantine hospital, and were handed over to me for that purpose, and the patient was placed there immediately. The heat of skin was 104·5, and albumen commenced to show itself in the urine already. The head symptoms were most distressing, but great relief was afforded by the simple but most efficacious plan of applying one leech to the internal nares by a tube. By this means it was thought the ethmoidal vessels would be directly relieved, and the subsequent bleeding from the leech would be equivalent to natural epistaxis. Immense relief was afforded without much depletion by this local measure. But the virulence of the attack was very great. Black vomit appeared on the 10th, and subsequently melanic stools. The hyposulphites were administered with the usual remedies; the current symptoms being narrowly watched. The distress of the stomach, bismuth, with counter irritation, seemed to allay. Lime water and milk, soda water and milk, champagne, &c., had but transitory effect. Turpentine as an enema afforded relief; and I found in the restless and watchful delirium that a few minims of chloroform

* Surgeon Pierce Mansfield, B.A., M.D.

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chloroform inhaled were grateful, but of course could only be applied before any tendency to coma appeared. He succumbed, however, despite every effort, and died on the sixth day.

The accession of the disease to the six others who were seized is remarkable as a clear proof, as far as it goes, of the contagious nature of the fever.

I. The officer, who died as above.

II. An able seaman. The man was on the sick-list with ulcer for three days during the period of the officer's illness, and was discharged to duty on the 11th of December. The sore was daily dressed by myself or the assistant surgeon during this period. He returned on the 13th of December with febrile symptoms, and on the 15th showed albuminous urine, &c. The form of this fever changed its type only when we had got north to a temperature of 40°.

III. An able seaman; showed symptoms on the 16th. He was one of the galley's crew, and unavoidably came in contact with an attendant on the officer, who was one of the same boat's crew, and accidentally pulled at the funeral that day. In this patient there was severe fever. Tube casts and epithelium in the urine, observed by the microscope. Albumen; severe gastric symptoms; no black vomit.

IV. One of the sailmaker's crew; showed decided febrile symptoms on the 17th at sea. He had been constantly at work in the gangway, the passage leading to the outer cabin-door, and had passed closely from time to time. The symptoms, as of yellow fever, became more marked on the 22nd and 23rd.

V. An ordinary seaman; a weakly lad, who had a febrile attack since the 8th of December, and was progressing favourably, showed suspicious symptoms on the 16th, when it was evident that the fever had seized him. On the 18th the urine was albuminous, with tube casts, and black vomit appeared on the same day. This recurred but once subsequently, and the prominent symptoms abated only as the north was approached; even then the convalescence was most unsatisfactory and protracted, the tongue, &c. showing how much the primæ viæ were at fault.

VI. One of the carpenter's crew; was engaged under my immediate superintendence in placing the body of the officer in the coffin on the 15th, during which operation, despite all precautions, a most intolerable fetor emanated from it. The first symptoms appeared in him on the 19th. He is slowly recovering. The stomach was much affected, but there was no black vomit.

VII. A carpenter's mate; was employed on the same duty with the preceding, and complained of febrile disturbance on the 18th. It was not, however, until after an incubation of six or eight days that specific symptoms appeared.

"In these cases there can be traced with very little doubt the certain transmission by contagion. Until those that presented febrile symptoms in the first instance were marked with subsequent specific ones, as evidenced in the urine by microscopic observation, &c., they were not, although otherwise isolated, placed in the quarantine cabin.

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The urine in all was affected to a greater or less extent, diminishing as the cold increased and the kidneys acted better. There was evidence of a most determined struggle between patient and disease, which latter I fully believe to have been overcome mainly, if not entirely, by the rapid change of climate or temperature, the high blood-temperature being reduced. There were other cases exhibiting febrile paroxysms of a mild form during the progress north, accompanied by constipation, rachitic and lumbar pains, headache, lethargy and prostration, and most of these in people having more or less connection with the infected.

"The utmost precaution was adopted in disinfecting continuously, by means of very large quantities of carbolic acid, and more particularly by the periodical use of sulphurous acid fumes in adjoining cabins, to which and back again patients were removed with cots, as necessary. The bedding and clothing were destroyed, and the decks and latrines had solution of carbolic acid employed freely on and in them.

"After the sixth or seventh day, specific treatment was changed for that which best antagonised the current symptoms; and on the 30th of December, the day of our arrival at Halifax, the patients were landed and lodged in the quarantine shed of the sick quarters of the dockyard.

"As to the origin of this sickness, there can be little if any doubt that it sprung from Her Majesty's ship *Aboukir*, at Port Royal, Jamaica. It prevailed in that ship while we were there, from the 25th of November to the 7th of December, during which time two deaths from yellow fever occurred at the Royal Naval Hospital, in the persons of men from that ship. The surgeon was in hospital with yellow fever, and the assistant-surgeon of the *Dart* being also ill and on sick leave, I received orders to take medical charge of both these ships, there being no medical officer in them. During this time they were visited twice daily, either by myself or the assistant-surgeon; and on the 5th of December I conveyed what appeared to be a doubtful case from the *Aboukir* to the hospital. On the 6th, there was a marine exhibiting suspicious symptoms; but on the 7th we left for Port-au-Prince. Besides these circumstances, there was free intercourse, as to visiting, &c., between this ship and the *Aboukir*. The *Dart* and the town were healthy; but there were three deaths in the garrison during this time, the first occurring on the day of our arrival." . . . "This appears to be a summary of the history of the attack in the present instance, as connected with Port Royal. The poison had made itself a nidus in the ship, and would undoubtedly have germinated and propagated itself rapidly had it still continued to find good soil, which the approach northward to the frost disorganised and destroyed."

Cholera.—A fatal case of this malignant disease occurred in the person of a boy of the *Galatea*, at Calcutta, who presented himself at 8.30, a.m. of the 26th of December, complaining of diarrhœa and vomiting, which had come on during the night. The medical officer* says:—"A draught, containing sulphuric acid and chlorodyne,

* Additional Surgeon William Labdon Powell.

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dyne, was administered; this had the effect of staying the vomiting; but at 9h. 30 a.m. he was brought into the sick-bay in a state approaching collapse. He was at once put to bed, hot water tins applied to the feet and calves, and the draught repeated, followed in a few minutes by two ounces of port wine. From this time he gradually became worse, all the symptoms of cholera becoming fully developed, and he died at 3h. 5 p.m. At Calcutta, at all seasons of the year, there are sporadic cases of cholera; and in this particular instance the disease could not be traced to any special exciting cause, but may have been provoked by overindulgence on Christmas-day. The patient had had no communication with the shore, nor had he drank any of the river water."

II. General Diseases—Section B., or Constitutional Group.

Class II.
Sect. B.

Under this head 1,031 cases of various forms of disease were entered on the sick-list, of which sixty-three were invalided and eight proved fatal. Rheumatism and primary and secondary syphilis were the most numerous affections.

Primary and Secondary Syphilis.—The vessels in which these diseases were most prevalent were the Bristol, the Donegal, the Galatea, the Juno, the Scylla, and the Serapis.

In the Bristol, in which there were seventeen cases of primary syphilis and nine of secondary syphilis, most of the disease was contracted in English ports. In the Donegal the primary disease was contracted at Liverpool, where she was stationed. In the Galatea, in which there were thirty-seven cases of primary and eleven of secondary syphilis, most of the disease was contracted in China and Japan. With reference to the former country the staff-surgeon* observes:—"During our stay at Hong Kong I had an opportunity of visiting several public institutions, and my attention was particularly directed to the great decrease in the number of venereal complaints, when contrasted with former experience whilst serving on that station some twelve years previously, when syphilitic complaints formed one of the greatest scourges that naval medical officers had to contend with. On visiting Her Majesty's hospital ship Melville, I ascertained that cases of this disease were of rare occurrence, and chiefly contributed by ships on arrival; but there being only a small naval force now employed in the south of China, the decrease was partly accounted for. On instituting further inquiry on the subject, I ascertained that the Contagious Diseases Act had for several years past been rigidly enforced by the colonial surgeon, who has devoted a good deal of attention to the mitigation of this evil. The population of Hong Kong has increased very rapidly during the past ten years; the harbour is still much frequented by shipping from various parts of the world, and a considerable military force is still maintained; yet there is a marked decrease of venereal complaints. There is a strict surveillance by the police of the houses occupied by prostitutes, and the periodic examination of this class of people appears to be associated with no moral

* Staff Surgeon Alexander Watson, M.D.

moral degradation. The principal part of the expense attending the maintaining the hospital establishment devolves on the owners or keepers of the tenements occupied by this class of people, so that they become equally interested in submitting early any cases requiring treatment. On attending at one of the periodical examinations, I was much impressed with the efficiency of the instruments used by the medical officer, and, I believe, invented by himself, with which upwards of ninety cases were thoroughly inspected (without any apparent inconvenience to patient or operator) in less than an hour."

In the Juno there were seventeen cases of primary and eleven of secondary syphilis; of these two cases of primary and four of secondary disease occurred amongst supernumeraries, taking a passage in the ship. In connection with the remainder, the surgeon* makes the following observations:—

"Fifteen cases of primary and seven of secondary syphilis have been under treatment. The former, which show 474 days' sickness, were all discharged to duty, and give an average of 31·6 days' treatment for each case. Of the latter, with 320 days' sickness, an average of 45·6 days' treatment, five were discharged cured and two sent to hospital.

"With respect to the secondary syphilis, the large number of days' sickness on board was occasioned by one case, which made a protracted recovery from sinuses and fistulous openings forming in the left groin over an indolent bubo; without this case the average number of days under treatment is twenty-five.

"The following Tables will show the different places where the disease was contracted.

TABLE I.—CASES OF PRIMARY AND SECONDARY SYPHILIS.

	Number of Case.	Age.	Rate.	Disease.	Date Contracted.	Where Contracted.	State when seen.	How Discharged.	Remarks.
1st Quarter.	1	19	O. S. -	Syphilis, Primary -	4 January	Portsmouth	Soft sore on sulcus	Cured.	
	2	27	C. A. G.	" " -	20 "	"	Soft sore on sulcus and glands.	Cured.	
	3	27	C. Mate	" " -	18 "	"	Soft sore on sulcus	Cured.	
	4	24	Barber -	" Secondary	21 Dec. - 1866;	"	Bubo right side of groin.	Cured.	
	5	23	A. B. -	" " -	December 1868;	"	Nodes on shins -	Relieved.	
	6	25	W. O. Cook.	" " -	December	"	Bubo right groin	Cured.	
2nd Quarter.	7	28	G. Mate	" Primary -	4 April -	Cape of Good Hope	Soft sore - -	Cured.	
	8	18	Off. -	" Secondary	Not sure -	China -	Bubo left groin -	Hospital, Japan.	
3rd Quarter.	9	32	M. -	" Primary -	16 July -	Yokohama	Soft sore - -	Cured.	
	10	19	O. S. -	" " -	16 " -	"	Soft sore - -	Cured.	
	11	19	Off. -	" Secondary	Not sure -	China -	Bubo left groin -	Cured	Re-entry.
	12	22	A. B. -	" Primary	16 July -	Yokohama	Soft sore - -	Cured.	
	13	19	O. S. -	" " -	20 "	"	Soft sore - -	Cured.	
	14	20	A. B. -	" " -	20 " -	"	Soft sore and bubo.	Cured.	
	15	19	O. S. -	" " -	22 August	Hongkong	Soft sore and gonorrhœa	Cured	During treatment coppery blotches.
	16	23	A. B. -	" " -	23 " -	"	Soft sore with a white surface.	Cured	Had secondary coppery blotches.
	17	21	M -	" " -	20 July -	Yokohama	Soft sore - -	Cured.	
4th Quarter.	18	21	O. S. -	" " -	25 August	Hongkong	Soft sore - -	Cured.	
	19	20	M. -	" " -	14 Sept. -	Singapore	Soft sore - -	Cured.	
	20	24	Off. -	" " -	14 " -	"	Soft sore - -	Cured.	
	21	23	A. B. -	" Secondary	Not sure -	Portsmouth	Nodes -	Relieved	Re-entry.
	22	19	O. S. -	" " -	14 Sept. -	Hongkong	Coppery eruption and rheumatism.	Hospital, Haslar.	Re-entry, secondary eruption.

* Surgeon D. Wilson
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TABLE 2.—Abstract of Cases showing the numbers contracted at each place.

Place.	Disease.	Number of Cases.	Disease.	Number of Cases.	TOTAL.
Portsmouth - - -	Syphilis, Primary -	3	Syphilis, Secondary -	4	7
Cape of Good Hope - - -	" " -	1	" " -	-	1
Hongkong - - -	" " -	3	" " -	3	6
Yokohama - - -	" " -	6	" " -	-	6
Singapore - - -	" " -	2	" " -	-	2

" It will be observed that the greatest number were diseased during the third quarter of the year at Hongkong and Yokohama.

" Of the seven who contracted the disease at Portsmouth, four had the secondary form of the disease, two followed by buboes, and two by nodes on the shins.

" Of the six who contracted the primary disease at Hongkong, three were entered for the secondary symptoms; besides two others, numbered 15 and 16, suffered from coppery eruption whilst under treatment for the primary sores. The cases in Table 1, numbered 8 and 11, 15 and 22, appear as re-entries.

" Of the six who contracted the primary disease at Yokohama, it is remarkable to observe that none were followed by secondary symptoms. By expressing my surprise at no secondary affection following the inoculation from the disease contracted at Yokohama, I must say there were no indications in the appearance of the sores to warrant one to expect any secondary affection; but from the wreck one sees of so many people suffering from disease contracted in Japan, I almost expected to find every one diseased to be ultimately constitutionally affected.

" By my own observation Hongkong is still a hot-bed of venereal disease, and of the very worst kind. At Hongkong the police regulations for prostitutes are insufficient, and in most cases cannot be carried out against the women who are diseased. The system of having a set of brothels kept apart for the use of the Chinese portion of the inhabitants, and another for the Europeans, which is supposed to be cleaner and under stricter regulation of the police, is bad. By this double brothel management, the men who are granted leave of absence in the colony for the first time are as often found to have contracted the disease in the one brothel as the other. With the strictest police regulations it is impossible to prevent such irregularities occurring as above mentioned; and further, the women who find themselves diseased can easily leave the colony by passing over to the mainland of China, where they can often carry on their infamous traffic without interference from the European police authorities.

" At Yokohama and other Japanese seaport towns opened for foreign trade, such as Nagasaki and Hiogo, where we touched on the passage, venereal disease is very rife, notwithstanding the regulations enforced by the Japanese authorities to prevent the specific disease from spreading. At Nagasaki no law had been introduced to

to authorise the periodical inspection of prostitutes, and as far as I could learn no place had been established where they could treat the women who were known to suffer from venereal disease. I believe I am stating under the number when I say about one-third of the prostitutes are diseased who live in the town and keep themselves apart for the use of sailors. The Europeans of the place are not exposed to such risks of contracting disease as visitors, because they spend their lives more after the Eastern fashion with their concubines.

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Sect. B.

“At Hiogo, the Japanese authorities have established a regular brothel-palace, which is completely inclosed by palings to separate it from the rest of the town, and is governed by rules and statutes, the same as are in force at Yokohama. This place is fast rising into importance, and such an establishment as the one above referred to may prevent venereal disease from committing such havoc amongst the Europeans who may visit the port, as has hitherto been the case with the places opened for traffic with foreigners.”

In the Scylla there were eighteen cases of primary, and seven of secondary syphilis. All the primary disease was contracted in England, with the exception of one case attributable to contagion at Monte Video.

There were twenty-one cases of primary, and six of secondary syphilis in the Serapis. As a means of ascertaining the existence of, and as much as possible checking the progress of disease, the surgeon* has a favourable opinion of the periodical examination of the ship's company. He says “General inspections of the men have been made, and I have reason to believe much benefit arises from the efficient performance of this duty. The certain knowledge that before going on leave, or coming into harbour, they must submit to examination, causes the men to apply as soon as they suspect anything to be the matter with them, and I incline to the opinion that these examinations are not offensive to the men. Only one man within two years has objected, and when examined he was found to be labouring under gonorrhœa.”

III. Diseases of the Nervous System and Organs of the Special Senses.

Under this head 255 cases of various forms of disease were entered on the sick-list, of which, twenty-six were invalided, and three proved fatal.

Class III.

Apoplexy.—Of two cases of this disease which occurred in the Force, both proved fatal. One of the cases occurred in the person of

* Surgeon John Breakey, M.D.

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of a petty officer of the Juno, at Hong Kong. Three days before his death he had been on leave, and evidently had indulged freely in spirituous liquor. On the day of the fatal seizure he had been ailing, but thought that a good night's rest would put him to rights. About midnight, however, he was heard to be breathing heavily in his hammock, and found to be quite unconscious. His breathing was laboured and stertorous (32 in the minute), the pulse 86, and weak; and the left pupil slightly contracted. The stools had been passed involuntarily in his hammock, and he was in a state of profound coma. He only lived about two hours after being first seen. He had been a remarkably steady man, and it was thought that the sudden change in his habits had induced fatal congestion of the brain and nervous system.

The other fatal case occurred in the person of a Marine of the Serapis, who was found dead in a brothel in Portsmouth. Post-mortem examination showed extensive extravasation of blood at the base of the brain.

A fatal case of encephalitis occurred on board the Egmont in the person of a boy, one of the crew of the Boxer. No information has been furnished in connection with this case.

IV. Diseases of the Circulatory System.

Class IV. Forty-eight cases of different forms of disease were entered on the sick-list under this head, of which twenty-eight were invalided, and six proved fatal. Four of the deaths resulted from organic disease of the heart, and two from pericarditis.

V. & VI. Diseases of the Absorbent System and Ductless Glands.

Classes V. and VI. There were seventy-three cases of sympathetic bubo, and two of other forms of glandular disease under treatment during the year, but they were of no importance, and call for no observations.

VII. Diseases of the Respiratory System.

Class VII. Under this heading 1,218 cases of various forms of disease were entered on the sick-list, of which, nine were invalided, and seven terminated fatally. Of the total number, 1,091 were cases of common catarrh. One death was from hæmoptysis, and the remainder from different forms of inflammatory disease.

VIII. Diseases of the Digestive System.

Under this head 1,525 cases of various forms of disease were entered on the sick-list, the most numerous affections being sore-throat, dyspepsia, and diarrhœa. Of the total number, twenty-two were invalidated, and eight proved fatal. Of the deaths, two were from dysentery, two from diarrhœa, and four from abscess of the liver. There was nothing of a special character in connection with these diseases. Class VIII.

Dysentery and Diarrhœa.—In passing through the tropics, and in changing from salt to fresh diet, the crews of the vessels composing the flying squadron suffered, although by no means to a great extent, from bowel affections. The staff surgeon* of the Liverpool, in which vessel three cases of dysentery, and fifty-six of diarrhœa were entered on the sick-list, observes that "the greatest number of cases during any week occurred while at Rio, and at Monte Video. The colicky pains were severe, and vomiting was a frequent accompaniment. Whenever there is a change of diet from salt meat to fresh, with vegetables, and water from the shore, there invariably occur, more or less, diarrhœal cases; more numerous where the extremes of temperature are great, be they high or low. When catarrh is prevalent, the intestines are frequently affected, instead of the bronchial mucous membrane. In China, as in many other places, river water will, no doubt, produce it, and there condensed water should always be used, or wherever there is any reason to suppose that any putrid animal matter has percolated into the place of supply."

With respect to the cases of dysentery which came under notice, he remarks, "only three cases of this disease have been under treatment, and they did well. One case occurred six days after our arrival at the Cape of Good Hope; the second case three days after leaving the Cape; and the third at Sydney. They were not mild cases; the stools were bloody mucus, upwards of twelve during the twenty-four hours, with some tormina, but not much tenesmus; no constant nor fixed pain in any part of the abdomen, nor was there any unequivocal fever. I have given the greatest consideration to the treatment of this disease, in China, where I attended the Military Hospital, in Ceylon, at the Mauritius and elsewhere, and considered, after having fairly tried large and small doses of calomel and opium, with or without venesection, that there is no drug in the British Pharmacopœia equal to ipecacuanha.

"I consider that the treatment should be commenced with a small dose of castor oil (3 iv.), with laudanum (3 ss.), where there is a furred

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Class VIII.

furred tongue, or any reason to suppose that some indigestible matter remains in the stomach or intestines. In about two hours subsequently the ipecacuanha is to be commenced with, four grains with half a grain of opium every two hours, and a large sinapism is to be applied to the abdomen within six hours. The diet must be a farinaceous one, with plenty of barley or congee water for drink, into which thirty grains of pot. tart. acid. have been put, as also some burnt biscuit or toast. In about three days it is generally safe to give thrice daily a cupful of lukewarm panada, with port wine, and one pint of chicken broth during the twenty-four hours.

“ If the patient comes under treatment when the premonitory symptoms of the disorder are present, when the bowels are first disordered, and he complains of chills followed by slight flushes, with coldness of the back and loins, he should be put into a hot bath (105°) and be kept in it until he becomes rather faint, or until a copious rush of sweat, or both, are induced, unless dangerous determination to the brain should occur. The profuse sweating should be encouraged for six or eight hours, and at the expiration of this period should there not be unequivocal yielding of all the urgent symptoms, if the pains are great and attended with much tenesmus, put him into a hot bath for the second time; and, if robust and plethoric, with a full pulse and hot skin, a few leeches (eight to ten) around the margin of the anus, will generally afford considerable relief, but the oozing from their bites must be arrested before any fomentations are applied, except to the abdomen.

“ Should the tongue be found yellow, with nausea and scalding, and yellow or greenish stools, the ipecacuanha had better be given in larger doses (ten grains) so as to produce vomiting, which will prevent the acrid bile from irritating the bowels when passing over the inflamed parts. Purgatives of a drastic nature,—too often given with the view of removing scybalous matters, must be avoided, and half an ounce of castor oil should be considered the only safe one; although in those exceptional cases where the stools are like orange pulp, the pulv. jalap. co. in 3j doses, has certainly been beneficial.

“ There will very probably be found some tender spot in the course of the colon on the third or fourth day. A blister two or three inches square should be applied there.

“ The above plan of treatment having been steadily persevered in for a few days, the inflammatory condition of the intestinal canal will be found to yield gradually, and make way for returning health from the sixth to the tenth day.

“ It is of consequence to remember that there are two stages; 1st, the inflammatory; and, 2nd, the ulcerative; and of course it is of the utmost importance to prevent the second stage by cutting short the first.

“ If the mucous, gelatinous, or slimy stools are merely streaked with blood, we may consider this appearance as an indication that the blood has exuded from the inflamed or excoriated capillaries supplying the mucous surface, without any sensible rupture or solution of continuity in the part affected. Blood is occasionally
evacuated

evacuated in very large quantities, and distinct from the other matters; it then flows from the lower parts of the large intestines. When consisting of coagula, and dark grumous clots intensely mixed with the discharges, it then proceeds from the upper part of the colon and cæcum. The first may or may not proceed from an ulcerated part, but when it presents the venous character, and occasionally a dark muddy appearance mixed intimately with watery, feculent, and offensive dejections, it is characteristic of ulceration.

Irregular
Force.
Class VIII.

"When the dysenteric stools have been stopped, and there is subsequent constipation, prescribe two grains of powdered rhubarb every three hours, carefully avoiding any stronger medicine.

"During convalescence from dysentery, the diet must be most careful, and, if possible, night air, rain, fogs, wet feet, &c., avoided."

The staff surgeon* of the *Phœbe*, another vessel of the flying squadron, in which there were one case of dysentery and twelve of diarrhœa, says, with respect to the latter affection, that "the exciting cause in some appeared to be a change of water, as many occurred immediately this took place, the condensed water being so pure compared with that obtained at the various places at which it was procured. Change from condensed water to that obtained from the shore I have frequently observed upon other occasions produce attacks of diarrhœa."

IX. and X. Diseases of the Urinary and Generative Systems.

Under this head 501 cases of various forms of disease were under treatment, of which twelve were invalided. The majority of the cases were gonorrhœa and orchitis, the latter mainly of gonorrhœal origin. None of the diseases under this head call for any comments.

Classes IX.
and X.

XI. Diseases of the Organs of Locomotion.

There were forty-three cases of various forms of disease of the bones, joints, &c. under treatment, of which six were invalided, Synovitis was the commonest affection,

Class XI.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Under this head 2,562 cases of various forms of disease were entered on the sick-list, two-thirds of which were boils and abscesses, and the majority

Classes XII.
and XIII.

* Staff Surgeon John Ward.

Irregular
Force.
—
Classes XII.
and XIII.

majority of the remainder, ulcers. Boils and abscesses were very common and caused considerable loss of service in the flying squadron. They were attributed by the medical officers generally, to the cachectic condition engendered in the men by the prolonged use of salt meat diet, and by numerous climatic changes. The staff surgeon of the Liverpool also thinks that the custom of frequently wetting the deck on which the men mess, is very liable to induce these troublesome and painful affections.

Unclassed Diseases.

One hundred and one cases appear under this head, of which ninety-one were debility resulting, as a rule, from climatic cachexia; seven were cases of delirium tremens; and three of poisoning, one by alcohol, one by lead, and one was a case of fish poisoning.

Delirium Tremens.—Of the seven cases of delirium tremens, one occurred in the person of an officer; four in able-seamen; one in a mess-servant; and the rating in one case is not known.

Wounds and Injuries.

Under this head there were 2,179 cases of wounds and other injuries, 114 cases of burns and scalds, and thirteen cases of submersion and drowning. Of these twelve persons were invalided for the results of injuries; six died from the effects of injuries; four from scalds or burns; and ten were drowned.

Of the fatal injuries, four men sustained fatal fracture of the skull, three by falling from aloft, and one by a blow from a block. One man sustained fatal internal injuries by falling from aloft, and one fell from a staircase to the pavement and was killed.

Four persons were scalded to death by the explosion of a boiler.

Ten persons were drowned, nine by falling overboard, and one by being capsized in a boat.

The total number of deaths was sixty, which is in the ratio of 8 per 1,000, being an increase compared with the preceding year equal to 5 per 1,000.

Invalided.

From General Diseases, Section B., sixty-three persons were invalided, viz., thirteen for rheumatism; eleven for secondary syphilis; two for dropsy; two for scrofula; and thirty five for phthisis pulmonalis. Twenty-six persons were invalided for diseases of the nervous

nervous system and organs of the special senses; twenty-eight for diseases of the circulatory system; nine for diseases of the respiratory system; twenty-two for diseases of the digestive system; twelve for diseases of the urinary and generative systems; six for diseases of the organs of locomotion; nine for diseases of the cellular tissue and cutaneous system; twelve for unclassified diseases; and twelve for wounds and injuries of various kinds. The total number invalided was 199, which is in the ratio of 26·7 per 1,000, being an increase compared with the preceding year equal to 3·6 per 1,000.

Irregular
Force.
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TABLE, No. 1.

SHOWING the Number of Cases of all DISEASES and INJURIES, and the Number
INVALIDED and DEAD, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Vaccinia - - - -	2	·2	—	—	—	—
Scarlet Fever - - - -	2	·2	—	—	—	—
Measles - - - -	8	1·	—	—	—	—
Enteric Fever - - - -	6	·8	—	—	1	·1
Simple Continued Fever - -	221	29·6	—	—	—	—
Yellow Fever - - - -	12	1·6	—	—	5	·6
Ague - - - -	31	4·1	—	—	—	—
Remittent Fever - - - -	46	6·1	—	—	—	—
Cholera - - - -	1	·1	—	—	1	·1
Pyæmia - - - -	—	—	—	—	1	·1
Mutops - - - -	10	1·3	—	—	—	—
Influenza - - - -	8	1·	—	—	—	—
Erysipelas - - - -	15	2·	—	—	—	—
II. General Diseases, Section B.:						
Rheumatism - - - -	493	66·1	13	1·7	1	·1
Gout - - - -	14	1·8	—	—	—	—
Syphilis - { Primary - -	316	42·4	—	—	—	—
{ Secondary - -	151	20·2	11	1·4	—	—
Scrofula - - - -	6	·8	2	·2	—	—
Phthisis Pulmonalis - -	45	6·	35	4·6	7	·9
Purpura - - - -	1	·1	—	—	—	—
Scurvy - - - -	1	·1	—	—	—	—
Dropsy - - - -	4	·5	2	·2	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses:						
Apoplexy - - - -	2	·2	1	·1	2	·2
Sunstroke - - - -	2	·2	—	—	—	—
Paralysis - - - -	11	1·4	4	·5	—	—
Vertigo - - - -	13	1·7	1	·1	—	—
Epilepsy - - - -	18	2·4	6	·8	—	—
Neuralgia - - - -	52	6·9	1	·1	—	—
Insanity - - - -	8	1·	2	·2	—	—
Other Diseases of the Brain -	3	·4	1	·1	1	·1
Hysteria - - - -	1	·1	—	—	—	—
Diseases of the Eye - -	111	14·8	10	1·3	—	—
Diseases of the Ear - -	32	4·2	—	—	—	—
Diseases of the Nose - -	2	·2	—	—	—	—

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:						
Disease of the Heart { Functional -	25	3·3	8	1·	—	—
{ Organic -	17	2·2	16	2·1	4	·5
Pericarditis - - - -	—	—	—	—	2	·2
Aneurism - - - -	2	·2	3	·4	—	—
Varicose Veins - - -	4	·5	1	·1	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	73	9·7	—	—	—	—
Glandular Diseases - -	2	·2	—	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - -	5	·6	1	·1	—	—
Catarrh - - - -	1,091	146·4	—	—	—	—
Hæmoptysis - - - -	9	1·2	2	·2	1	·1
Asthma - - - -	20	2·6	—	—	—	—
Other Diseases of the Lungs -	93	12·4	6	·8	6	·8
VIII. Diseases of the Digestive System:						
Cynanche - - - -	313	42·	—	—	—	—
Diseases of the Mouth, Teeth, &c. - - - -	3	·4	1	·1	—	—
Dyspepsia - - - -	405	54·3	1	·1	—	—
Dysentery - - - -	18	2·4	1	·1	2	·2
Diarrhœa - - - -	544	73·	1	·1	2	·2
Colic and Constipation - -	101	13·5	1	·1	—	—
Hæmorrhoids - - - -	28	3·7	1	·1	—	—
Hernia - - - -	15	2·	7	·9	—	—
Worms - - - -	37	4·9	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - -	22	2·9	4	·5	—	—
Diseases of the Liver - -	36	4·8	5	·6	4	·5

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:						
Diseases of the Kidneys - -	20	2·6	4	·5	—	—
Diseases of the Bladder - -	2	·2	—	—	—	—
Gonorrhœa - - - -	294	39·4	—	—	—	—
Stricture - - - -	32	4·2	4	·5	—	—
Varicocele - - - -	2	·2	1	·1	—	—
Orchitis - - - -	143	19·1	—	—	—	—
Diseases of the Organs of Generation - - - -	8	1·	3	·4	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c.	43	5·7	6	·8	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	1,974	264·9	3	·4	—	—
Ulcer - - - -	448	60·1	6	·8	—	—
Erythema - - - -	15	2·	—	—	—	—
Carbuncle - - - -	3	·4	—	—	—	—
Scabies - - - -	49	6·5	—	—	—	—
Other Diseases of the Skin -	73	9·7	—	—	—	—
Unclassed:						
Debility - - - -	91	12·2	11	1·4	—	—
Delirium Tremens - - -	7	·9	1	·1	—	—
Poisoning - - - -	3	·4	—	—	—	—
Wounds and Injuries:						
Wounds, Injuries, &c. - -	2,179	292·4	12	1·6	6	·8
Burns and Scalds - - -	114	15·3	—	—	4	·5
Submersion and Drowning -	13	1·7	—	—	10	1·3
TOTALS - - -	10,024	1,345·5	199	26·7	60	8·

TABLE, No. 2.

SHOWING the Number of Days' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-Pox - - - -	-	45	45	·1	—
Vaccinia - - - -	15	-	15	—	—
Scarlet Fever - - - -	38	-	38	·1	—
Measles - - - -	53	1,690	1,743	4·7	·6
Influenza - - - -	63	7	70	·1	—
Enteric Fever - - - -	53	129	182	·4	—
Simple continued Fever - -	1,678	745	2,423	6·6	·8
Yellow Fever - - - -	194	-	194	·5	—
Ague - - - -	344	77	421	1·1	·1
Remittent Fever - - - -	384	25	409	1·1	·1
Cholera - - - -	1	-	1	—	—
Hooping Cough - - - -	-	32	32	—	—
Mumps - - - -	69	20	89	·2	—
Erysipelas - - - -	261	247	508	1·3	·1
II. General Diseases, Section B.:					
Rheumatism - - - -	5,998	2,833	8,831	24·1	3·2
Gout - - - -	93	40	133	·3	—
Syphilis - {Primary - - - -	7,368	5,899	13,267	36·3	4·8
{Secondary - - - -	3,443	2,260	5,703	15·6	2·
Epithelioma - - - -	-	11	11	—	—
Scrofula - - - -	84	196	280	·7	—
Phthisis Pulmonalis - - -	1,102	2,578	3,680	10·	1·3
Purpura - - - -	4	11	15	—	—
Dropsy - - - -	49	140	189	·5	—
Scurvy - - - -	21	-	21	—	—
III. Diseases of the Nervous System, and Organs of the Special Senses:					
Apoplexy - - - -	-	5	5	—	—
Sunstroke - - - -	16	25	41	·1	—
Vertigo - - - -	55	80	135	·3	—
Paralysis - - - -	215	273	488	1·3	·1
Diseases of the Nervous Sy sem	8	15	23	—	—
Epilepsy - - - -	113	114	227	·6	—
Neuralgia - - - -	506	105	611	1·6	·2
Insanity - - - -	58	238	296	·8	·1
Other Diseases of the Brain -	21	223	244	·6	—
Ophthalmia - - - -	1,179	686	1,864	5·1	·6
Diseases of the Ear - - -	259	86	345	·9	·1
Diseases of the Nose - - -	289	26	315	·8	·1

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IV. Diseases of the Circulatory System:					
Disease of the { Functional -	264	526	790	2.1	.2
Heart - { Organic -	267	442	709	1.9	.2
Aneurism - - - -	123	61	184	.5	—
Varicose Veins - - -	39	86	125	.3	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - -	1,834	517	2,351	6.4	.8
Glandular Diseases - -	17	38	55	.1	—
VII. Diseases of the Respiratory System:					
Diseases of the Larynx - -	48	25	73	.2	—
Catarrh - - - -	5,941	292	6,233	17.	2.2
Hæmoptysis - - - -	136	170	306	.8	.1
Asthma - - - -	233	78	311	.8	.1
Other Diseases of the Lungs -	1,602	1,774	3,376	9.2	1.2
VIII. Diseases of the Digestive System:					
Cynanche - - - -	1,994	410	2,404	6.6	.8
Diseases of the Mouth, Teeth, &c. - - - -	38	5	43	.1	—
Dyspepsia - - - -	2,084	349	2,433	6.6	.8
Dysentery - - - -	409	205	614	1.6	.2
Diarrhœa - - - -	2,592	162	2,754	7.5	1.
Colic and Constipation - -	416	28	444	1.2	.1
Hæmorrhoids - - - -	239	39	278	.7	—
Hernia - - - -	137	27	164	.4	—
Worms - - - -	148	—	148	.4	—
Other Diseases of the Stomach, Intestines, &c. - - -	224	433	657	1.8	.2
Diseases of the Liver - -	702	271	973	2.6	.3

TABLE, No. 2.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys, &c. -	305	350	655	1·7	·2
Diseases of the Bladder - -	30	36	66	·1	—
Gonorrhœa - - - - -	4,709	990	5,699	15·6	2·
Diseases of the Organs of Generation - - - - -	275	157	432	1·1	·1
Stricture - - - - -	284	558	842	2·3	·3
Varicocele - - - - -	2	23	25	—	—
Orchitis - - - - -	2,212	550	2,762	7·5	1·
XI. Diseases of the Organs of Locomotion:					
Diseases of the Bones, Joints, &c. - - - - -	654	610	1,264	3·4	·4
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	15,941	951	16,892	46·2	6·2
Ulcer - - - - -	7,448	2,089	10,437	28·5	3·8
Carbuncle - - - - -	—	15	15	—	—
Erythema - - - - -	148	36	184	·5	—
Scabies - - - - -	497	150	647	1·7	·2
Other Diseases of the Skin -	718	566	1,284	3·5	·4
Unclassed:					
Debility - - - - -	904	658	1,562	4·2	·5
Delirium Tremens - - -	23	164	187	·5	—
Poisoning - - - - -	33	57	90	·2	—
Wounds and Injuries:					
Wounds, Injuries, &c. - -	11,529	3,087	14,616	40·	5·3
Burns and Scalds - - -	1,161	102	1,263	3·4	·4
Submersion and Drowning -	10	11	21	—	—
TOTALS - - -	90,404	36,858	127,262	348·6	46·7

TABLE, No. 3. - - - - -
 SHOWING the Number INVALIDED from each - - - - -

CAUSE OF INVALIDING.	Arcthus.	Ariadne.	Barrosa.	Basilisk.	Boxer.	Bristol.	Bullfinch.	Cadmus.	Cosack.	Crocodile.	Elk.	Endymion.	Espoir.	Galates.	Himalaya.
II. General Diseases, Section B.:															
Rheumatism - - - - -	-	-	1	-	-	-	1	-	-	-	1	1	1	1	-
Syphilis, Secondary - - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Scrofula - - - - -	-	1	1	-	-	4	-	-	-	-	-	1	-	6	-
Phthisis - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dropsy - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:															
Apoplexy - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralysis - - - - -	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
Vertigo - - - - -	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Epilepsy - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neuralgia - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insanity - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disease of the Brain - - - - -	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Diseases of the Eyes - - - - -	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
IV. Diseases of the Circulatory System:															
Disease of Functional the Heart - - - - -	-	1	-	-	1	-	-	1	-	-	-	1	-	1	-
Aneurism - - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-
Varicose Veins - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII. Diseases of the Respiratory System:															
Aphonia - - - - -	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Hæmoptysis - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Other Diseases of the Lungs - - - - -	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
VIII. Diseases of the Digestive System:															
Disease of the Mouth, &c. - - - - -	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Dyspepsia - - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Dysentery - - - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Diarrhoea - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colic - - - - -	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Hæmorrhoids - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hernia - - - - -	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1
Other Diseases of the Stomach - - - - -	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-
Diseases of the Liver, &c. - - - - -	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems:															
Diseases of the Kidneys - - - - -	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Stricture - - - - -	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Varicocele - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Diseases of the Organs of Generation - - - - -	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
XI. Diseases of the Organs of Loco- motion:															
Diseases of the Bones, Joints, &c. - - - - -	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:															
Phlegmon and Abscess - - - - -	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-
Ulcer - - - - -	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-
Unclassed:															
Debility - - - - -	-	1	1	-	-	-	-	-	1	-	-	-	-	1	-
Delirium Tremens - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wounds and Injuries:															
Wounds - - - - -	-	1	-	-	1	-	-	-	-	-	-	-	-	1	-
TOTAL - - - - -	2	8	6	1	3	9	2	3	8	5	1	6	1	13	2

TABLE, No. 4. - - - - -
 SHOWING the Number of DEATHS in each - - - - -

CAUSE of DEATH.	Ariadne.	Barrosa.	Basiliak.	Boxer.	Bristol.	Bullfinch.	Crocodile.	Donegal.	Endymion.	Espoir.	Galatea.	Gladiator.	Himalaya.	Juno.
I. General Diseases. Section A. :														
Enteric Fever - - - -	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Yellow Fever - - - -	-	1	-	-	-	-	-	-	-	-	1	-	-	-
Cholera - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyæmia - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. General Diseases. Section B. :														
Rheumatism - - - -	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Phthisis - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	1
III. Diseases of the Nervous System and Organs of the Special Senses :														
Apoplexy - - - -	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Disease of the Brain - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IV. Diseases of the Circulatory Sys- tem :														
Organic Disease of the Heart -	-	-	-	-	1	-	-	-	1	-	-	-	-	-
Pericarditis - - - -	-	-	-	-	-	-	-	-	-	-	1	-	-	-
VII. Diseases of the Respiratory System :														
Hæmoptysis - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other Diseases of the Lungs -	-	-	-	-	-	-	-	-	-	-	2	-	-	-
VIII. Diseases of the Digestive Sys- tem :														
Dysentery - - - -	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diarrhœa - - - -	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Diseases of the Liver, &c. -	1	-	-	-	-	1	-	-	-	-	-	-	-	-
Wounds and Injuries :														
Wounds, &c. - - - -	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Burns and Scalds - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Submersion and Drowning -	1	-	-	-	-	-	1	-	-	-	-	1	1	-
TOTAL - - -	2	1	1	1	2	1	1	1	1	1	5	1	1	3

SHOW

DISEASE OR INJURY.	Arethusa.	Argus.	Ariadne.	Industry.	Juno.	Lapwing.	Lee.	Liffey.	Linnet.	Liverpool.
I. General Diseases, Section A.:										
Vaccinia -	-	-	-	-	-	-	-	-	-	1
Scarlet Fever -	-	-	-	-	-	-	-	-	-	-
Measles -	-	-	-	-	-	-	-	2	-	2
Enteric Fever -	-	-	-	-	-	4	-	-	-	-
Simple Continued Fever -	-	-	-	-	-	1	-	51	-	-
Yellow Fever -	-	1	-	-	1	-	-	-	-	23
Ague -	-	-	-	-	5	-	-	-	1	-
Remittent Fever -	-	-	-	-	-	2	-	-	-	-
Cholera -	-	-	-	-	-	-	-	-	-	-
Mumps -	-	-	-	-	-	-	-	-	-	-
Influenza -	-	-	-	-	-	-	-	8	-	-
Erysipelas -	-	-	-	-	-	-	-	-	-	-
II. General Diseases, Section B.:										
Rheumatism -	2	9	13	-	30	2	5	53	2	47
Gout -	-	3	3	-	-	3	-	-	-	-
Syphilis { Primary -	-	2	2	1	17	-	-	10	-	5
Secondary -	-	-	-	-	11	-	-	5	-	3
Scrofula -	-	-	-	-	1	1	-	-	-	-
Phthisis Pulmonalis -	-	-	-	-	4	-	-	4	-	1
Purpura -	-	-	-	-	-	-	-	-	-	-
Scurvy -	-	-	-	-	1	-	-	1	-	-
Dropy -	-	-	-	-	-	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:										
Apoplexy -	-	-	-	-	1	-	-	-	-	-
Sunstroke -	-	-	-	-	-	-	-	-	-	-
Paralysis -	-	-	-	-	-	-	-	-	-	2
Vertigo -	-	-	-	-	-	-	-	-	-	-
Epilepsy -	-	-	-	-	-	1	-	1	-	1
Neuralgia -	-	3	-	-	1	-	-	1	-	6
Insanity -	-	-	-	-	-	-	-	1	-	-
Other Diseases of the Brain -	-	-	-	-	-	-	-	1	-	-
Hysteria -	-	1	-	-	8	2	-	11	1	8
Diseases of the Eye -	-	-	-	-	2	3	-	-	-	-
Diseases of the Ear -	-	-	-	-	-	-	-	-	-	-
Diseases of the Nose -	-	-	-	-	-	-	-	-	-	-
IV. Diseases of the Circulatory System:										
Disease of the Heart { Functional -	-	-	-	-	-	1	-	-	-	2
Organic -	-	-	-	-	-	-	-	7	-	-
Aneurism -	-	-	-	-	1	-	-	-	-	-
Varicose Veins -	-	-	-	-	-	-	-	-	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands:										
Bubo (Symp.) -	-	-	2	-	-	-	-	6	-	2
Glandular Diseases -	-	-	-	-	-	-	-	-	-	-

FORCE.

Malacca.	Megara.	Midge.	Mutine.	Octavia.	Orienta.	Urgent.	Valorous.	TOTAL.	DISEASE OR INJURY.
-	-	-	-	-	-	-	-	2	I. General Diseases, Section A.:
-	-	-	-	-	-	-	-	2	Vaccinia.
-	-	-	-	-	-	-	-	2	Scarlet Fever.
-	1	-	-	-	2	-	-	3	Measles.
4	-	-	-	-	-	-	-	6	Enteric Fever.
-	-	-	-	10	14	-	-	221	Simple Continued Fever.
-	-	-	-	-	-	9	-	12	Yellow Fever.
-	-	2	-	-	-	-	-	31	Ague.
-	-	-	-	2	-	-	-	46	Remittent Fever.
-	-	-	-	-	-	-	-	1	Cholera.
-	-	-	-	-	-	-	-	10	Mumps.
-	-	-	-	-	-	-	-	8	Influenza.
-	-	-	-	-	-	-	-	15	Erysipelas.
6	1	-	5	9	13	-	-	493	II. General Diseases, Section B.:
-	-	-	-	-	1	-	-	14	Rheumatism.
-	2	10	1	2	9	3	-	316	Gout.
2	-	1	-	6	6	2	-	151	Primary - } Syphilis.
-	-	-	-	-	-	-	-	6	Secondary }
1	-	1	1	1	3	1	-	45	Scrofula.
-	-	-	-	-	-	-	-	1	Phthisis Pulmonalis.
-	-	-	-	-	-	-	-	1	Purpura.
-	-	-	-	-	1	-	-	4	Scurvy.
-	-	-	-	-	-	-	-	-	Droopy.
-	-	-	-	-	-	-	-	2	III. Diseases of the Nervous System and
-	-	-	-	-	-	-	-	2	Organs of the Special Senses:
-	-	-	-	-	-	-	-	2	Apoplexy.
-	-	-	-	-	-	-	-	11	Sunstroke.
-	-	-	-	-	3	-	-	13	Paralysis.
-	-	2	-	-	-	-	-	18	Vertigo.
-	-	-	-	-	4	-	-	62	Epilepsy.
-	-	1	-	-	-	-	-	3	Neuralgia.
-	-	-	1	-	2	-	-	3	Insanity.
-	-	-	-	-	-	-	-	1	Other Diseases of the Brain.
-	-	-	-	-	-	-	-	111	Hysteria.
1	1	1	2	3	2	-	-	32	Diseases of the Eye.
-	-	-	-	-	-	-	-	2	Diseases of the Ear.
-	-	-	-	-	-	-	-	-	Diseases of the Nose.
1	-	1	-	2	-	-	-	25	IV. Diseases of the Circulatory System:
-	-	-	-	-	-	-	-	17	Functional } Disease of the Heart.
1	-	-	-	-	-	-	-	2	Organic - }
-	-	-	-	-	-	-	-	4	Aneurism.
-	-	-	-	-	-	-	-	-	Varicose Veins.
2	-	-	2	4	-	-	-	73	V. & VI. Diseases of the Absorbent System
-	-	-	-	-	-	-	-	2	and Ductless Glands:
-	-	-	-	-	-	-	-	-	Bubo (Symp.)
-	-	-	-	-	-	-	-	-	Glandular Diseases.

L RETURNS

es in the Ships employed in the Irregular Force—continued.

Danke.	Donegal.	Elk.	Endymion.	Esopit.	Galatea.	Gladiator.	Himalaya.	Hornet.	Industry.	Juno.	Lapwing.	Lee.	Liffey.	Lionet.	Liverpool.
20	39	-	40	1	55	17	27	2	3	116	-	5	89	-	75
-	-	-	-	-	1	2	1	-	-	1	-	-	1	-	-
5	3	-	2	-	8	-	3	-	-	4	-	-	2	-	9
-	-	-	8	-	28	5	8	-	1	42	-	-	11	1	22
6	2	-	3	-	26	1	37	3	2	75	11	2	4	1	8
3	2	-	13	-	1	4	-	-	-	-	-	-	-	-	3
1	-	-	1	-	46	1	31	-	-	99	16	4	29	-	56
-	-	-	-	-	3	-	19	-	-	10	7	-	1	-	4
-	-	-	-	-	1	-	4	-	-	2	-	1	3	-	-
-	1	-	-	-	1	-	7	-	-	1	-	-	1	-	1
-	-	-	-	-	-	2	-	-	-	3	-	-	6	-	1
-	-	-	2	-	1	-	-	-	-	1	-	1	2	-	-
3	59	1	2	-	27	2	14	-	-	19	-	-	8	-	6
-	-	-	-	-	1	-	-	-	-	4	1	-	2	-	2
1	3	-	3	1	8	1	1	-	-	3	-	-	9	-	8
-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	5	1	-	1	1	1	1	-	5	-	4
17	17	4	109	-	132	26	34	8	-	192	28	4	142	-	186
2	9	-	28	1	23	3	13	2	-	58	1	7	30	-	14
-	-	-	-	-	6	-	1	-	-	-	-	-	-	-	-
-	2	-	6	-	-	1	-	-	-	5	-	-	3	-	-
-	2	-	-	-	2	1	-	-	1	6	-	-	9	-	7
1	-	-	1	-	4	2	-	2	2	9	5	1	2	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
26	28	4	69	2	143	33	71	8	6	134	7	7	147	4	189
1	2	1	6	-	11	3	2	-	-	6	3	-	3	-	2
-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
101	192	15	339	8	679	153	338	59	17	880	100	40	651	10	999

3 By Lead.

TABLE. Force—continued.

Malacca.	Megara.	Midge.	Mutine.	Octavia.	Orontes.		Urgent.	Valorous.	Total.	DISEASE OR INJURY.
-	-	-	-	-	-		-	-	5	VII. Diseases of the Respiratory System:
4	6	12	1	1	35		15	15	1,091	Diseases of the Larynx.
-	-	-	-	-	-		-	-	9	Catarrh.
1	4	2	-	-	3		1	2	20	Hæmoptysis.
-	-	-	-	-	-		-	-	93	Asthma.
-	-	-	-	-	-		-	-	-	Other Diseases of the Lungs.
1	6	4	-	10	11		3	2	313	VIII. Diseases of the Digestive System:
7	-	5	-	17	18		7	-	3	Cynanche.
-	-	-	-	2	2		-	-	405	Diseases of the Mouth, Teeth, &c.:
1	-	9	-	16	1		-	-	18	Dyspepsia.
-	-	1	-	2	6		1	4	544	Dysentery.
-	1	-	-	2	1		-	-	101	Diarrhœa.
-	-	-	-	2	-		-	-	28	Colic and Constipation.
-	-	-	-	16	-		-	-	15	Hæmorrhoids.
-	2	1	-	1	2		-	-	37	Hernia.
-	-	-	-	1	1		-	-	22	Worms.
-	-	-	-	-	-		-	-	36	Other Diseases of the Stomach, &c.
-	-	-	-	-	-		-	-	-	Diseases of the Liver, Spleen, &c.
-	-	1	-	-	-		-	-	20	IX. & X. Diseases of the Urinary and
1	3	-	-	6	10		7	1	2	Generative Systems:
-	-	-	-	-	1		1	-	294	Diseases of the Kidneys.
-	5	1	2	4	6		4	-	32	Diseases of the Bladder.
-	-	-	-	-	-		-	-	2	Gonorrhœa.
-	-	-	-	-	-		-	-	143	Stricture.
-	-	-	-	-	-		-	-	8	Varicocele.
-	-	-	-	-	-		-	-	-	Orchitis.
-	-	-	-	-	-		-	-	-	Diseases of the Organs of Genera-
-	-	2	-	2	-		1	-	43	tion.
-	-	-	-	-	-		-	-	-	XI. Diseases of the Organs of Locomotion.
-	-	-	-	-	-		-	-	-	Diseases of the Bones, Joints, &c.
11	8	16	2	18	23		4	3	1,074	XII. & XIII. Diseases of the Cellular
-	1	4	4	16	6		3	3	448	Tissue and Cutaneous System:
-	1	-	-	-	1		-	-	15	Phlegmon and Abscess.
1	1	1	-	-	2		1	-	3	Ulcer.
-	-	1	-	1	1		1	-	49	Erythema.
-	-	1	-	2	-		-	-	73	Carbuncle.
-	-	-	-	-	-		-	-	-	Scabies.
-	-	-	-	-	-		-	-	-	Other Diseases of the Skin.
3	-	6	1	4	1		-	-	91	Unclassed:
1	-	-	-	-	-		-	-	7	Debility.
-	-	-	-	-	-		-	-	3	Delirium Tremens.
-	-	-	-	-	-		-	-	-	Poisoning.
9	9	14	2	88	54		9	9	2,179	Wounds and Injuries:
1	1	3	-	2	6		-	1	114	Wounds, &c.
-	-	-	-	1	1		-	-	13	Burns and Scalds.
-	-	-	-	-	-		-	-	-	Submersion and Drowning.
57	58	106	97	261	262	54	84	46	10,014	- - - TOTAL.

TABLE, No. 6.

Showing the Names of the Ships; the Average Complements, &c.; the Number of Cases; the Total Number of Days' Sickness on Board; the Average Number of Men Sick Daily, in each Ship, and the Number Discharged to Hospital.

RATE, &c.	NAMES OF SHIPS.	Where Commissioned.	When Commissioned.	Number of Guns.	Tonnage.	Horse Power.	Period.	Average Com-plements.	Average Comple-ments corrected for Time.	Number of Cases of Disease and Injury.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily for Twelve Months.	Ratio per 1,000 of Average Force of each Ship.	Number Discharged to Hospital.
Fourth Rate	Arcturion	P. O.	8 June 1865	35	3,141	8,500	1 to 7 Jan. -	520	10	19	145	3	30	2
	Arcturion	P. O.	27 Nov. 1868	14	3,214	8,500	1 Jan. to 8 June	510	325	274	328	8.8	39.1	10
	Bristol	-	14 Feb. 1868	31	3,097	8,500	22 May to 31 Dec.	520	590	674	7,188	10.6	33.3	24
	Endymion	-	22 May 1869	31	2,466	8,500	Year -	520	815	350	3,508	9.6	30.4	16
	Galatea	-	27 Jan. 1867	36	3,227	8,500	Year -	545	565	670	7,714	21.1	35.7	33
	Liffey	-	27 July 1867	30	2,584	8,500	Year -	575	365	451	6,181	16.7	29.5	8
	Liverpool	-	8 May 1869	30	2,585	8,500	8 May to 31 Dec.	520	390	490	3,982	16.3	44.6	7
	Octavia	P. O.	14 June 1865	35	3,161	8,500	1 April to 31 July	530	290	361	2,875	7.8	44.3	11
	Phoebe	S. C.	6 May 1867	30	2,866	8,500	1 July to 31 Dec.	535	375	224	2,875	8.9	38.3	6
	Topaze	P. O.	25 Jan. 1866	31	2,669	8,500	1 July to 1 Sept.	430	80	163	1,484	4	50	7
Sixth Rate	Barrosa	-	9 June 1869	17	1,700	8,400	9 June to 31 Dec.	300	163	208	2,800	7.9	47.8	6
	Brix	-	30 June 1864	16	1,087	8,250	1 to 19 Jan. -	220	15	11	106	2	13.3	7
	Cadmus	C. and P. O.	14 April 1869	16	1,466	8,350	14 April to 8 June	375	45	46	276	7	15.5	6
	Coastal	-	11 Dec. 1868	16	1,298	8,350	1 Jan. to 30 June	320	166	281	2,685	7.8	44.2	7
	Dante	-	28 Nov. 1867	6	1,287	8,350	1 Oct. to 31 Dec.	185	49	101	781	2.1	46.6	6
	Gladiator	-	20 Aug. 1869	6	1,210	P. 430	20 Aug. to 31 Dec.	285	103	153	1,243	3.4	38.3	7
	Junco (including Superna-merus)	-	6 May 1868	6	1,463	S. 400	Year -	505	165	890	9,948	25.8	60.9	10
	Malacca	-	13 Nov. 1865	13	1,024	S. 200	1 July to 9 Sept.	190	35	57	1,116	8	83.7	6
	Rasoon	-	3 Nov. 1866	23	1,467	S. 400	Year -	285	285	339	3,215	8.8	30.6	33
	Scoot	-	17 May 1865	21	1,462	S. 400	1 Jan. to 5 May -	200	90	119	1,953	6.3	88.8	10
	Scylla	-	16 April 1869	16	1,467	S. 400	16 April to 31 Dec.	265	200	470	2,690	10.1	50.5	13
	Sirius	-	23 July 1869	6	1,268	S. 250	23 July to 30 Sept.	190	35	55	3,425	1.1	31.4	3
	Valorous	-	Nov. 1869	10	1,257	P. 400	13 to 31 Dec.	265	10	46	260	7	79	2
Sloop	Argus	-	23 Jan. 1866	6	981	P. 200	1 July to 3 Dec.	165	70	100	737	3	28.5	7
	Basillek	-	10 Sept. 1865	6	1,431	P. 400	1 Jan. to 13 April	185	56	51	500	6	39	-

Mutine	-	P. O.	Woolwich	7 April 1865	17	882	S. 200	1 Jan. to 30 Mar.	100	40	27	600	1-9	47-5	2
Perous	-	P. O.	Hong Kong	23 Jan. 1866	15	946	S. 200	1 July to 18 Oct.	165	45	55	758	2-	44-4	8
Spiteful	-	P. O.	Woolwich	2 Nov. 1866	6	1,054	P. 280	1 July to 23 Sept.	180	40	55	523	1-4	35-	1
Gun Vessel -															
Boxer	-	S. C.	Woolwich	14 Nov. 1868	4	465	S. 120	1 Jan. to 30 June	70	35	53	592	1-6	48-7	1
Bullfinch	-	S. C.	Sheerness	15 Oct. 1868	3	664	S. 100	1 Jan. to 31 Mar.	95	25	45	469	1-2	48-	1
Elk	-	- D.	Portsmouth	5 Dec. 1868	4	466	S.S. 130	1 Jan. to 30 April	70	10	15	125	1-3	30-	2
Hornet	-	S. C.	Portsmouth	9 Dec. 1868	4	464	S.S. 120	1 Jan. to 30 June	70	35	50	642	1-7	48-5	3
Lawwing	-	S. C.	Devonport	27 June 1868	3	663	S. 160	1 July to 31 Dec.	85	40	100	401	1-	25-	5
Lee	-	S. C.	Sheerness	10 June 1867	5	431	S. 90	1 April to 30 June	65	15	40	182	2-5	38-6	3
Midge	-	- C.	Devonport	19 Feb. 1869	4	464	S.S. 120	19 Feb. to 30 Sept.	75	45	105	925	2-5	55-5	7
Ringdove	-	S. C.	Portsmouth	26 Oct. 1868	3	666	S. 160	1 Jan. to 31 Mar.	90	20	57	386	1-	50-	-
Rocket	-	- C.	Sheerness	21 Oct. 1869	4	464	S.S. 120	22 Nov. to 31 Dec.	75	10	13	125	1-3	30-	-
Serpent	-	- D., P. O.	Sheerness	18 April 1865	4	695	S. 200	1 Jan. to 10 Aug.	95	60	101	1,116	3-	60-	8
Teaser	-	- C.	Sheerness	23 Nov. 1869	4	464	S.S. 120	23 Nov. to 31 Dec.	70	10	9	67	1-	10-	3
Thistle	-	C. and P. O.	Sheerness	18 Oct. 1869	4	465	S.S. 120	18 Oct. to 22 Nov.	50	5	13	54	1-	20-	3
Steam Vessel -															
Linnet	-	P. O.	Sheerness	8 Aug. 1865	3	268	S. 60	1 April to 3 July	40	10	10	83	2-	20-	-
Troop Ship -															
Crocodile	-	-	Portsmouth	15 April 1867	3	4,173	S. 700	Year - - -	210	310	106	1,259	3-4	16-1	4
Himalaya	-	-	Portsmouth	19 Feb. 1867	3	3,453	S. 700	Year - - -	200	200	336	3,947	10-8	51-	16
Orontes	-	- C.	Portsmouth	9 Jan. 1869	2	2,513	S. 500	9 Jan. to 31 Dec.	215	200	262	2,000	5-4	27-	21
Serapis	-	-	Portsmouth	26 April 1867	3	4,173	S. 700	Year - - -	255	255	293	9,131	5-8	29-7	23
Sinooon	-	-	Portsmouth	2 Feb. 1866	4	1,980	S. 400	Year - - -	100	190	193	1,691	4-4	33-1	10
Tamar	-	- C.	Devonport	15 Sept. 1869	3	2,513	S. 500	15 Sept. to 31 Dec.	910	60	69	625	1-7	28-2	9
Urgent	-	P. O.	Portsmouth	27 July 1864	4	1,931	S. 400	1 Jan. to 20 Aug.	170	110	84	1,547	4-2	36-1	15
Steam Ship -															
Industry	-	- S. C.	Woolwich	25 April 1865	2	636	S. 90	1 Jan. to 31 Mar.	60	15	17	95	2-	13-3	3
Megara	-	-	Woolwich	24 Dec. 1867	6	1,266	S. 300	Year - - -	120	190	56	616	1-6	13-3	9
Unarmed Ship -															
Donagel	-	- C.	-	25 Nov. 1869	24	3,245	S. 800	25 Nov. to 31 Dec.	1,160	190	102	1,645	4-5	37-5	16
Reaper	-	- C. and P. O.	-	-	-	-	-	8 Oct. to 8 Dec.	20	5	8	47	1-	30-	5
Revenge (1st Commission),	-	- C. and P. O.	-	-	75	8,352	S. 800	31 April to 27 Sept.	716	300	386	8,017	8-2	37-3	35
Revenge (2nd Commission),	-	- C.	-	16 Nov. 1869	32	3,232	S. 800	16 Nov. to 31 Dec.	980	199	299	1,524	4-1	34-1	4
Terrible	-	- C.	-	-	-	-	-	12 June to 31 Dec.	385	150	243	2,276	7-	46-6	25
Bermuda Floating Dock															
Bermuda Floating Dock	-	-	-	-	-	-	-	18 June to 31 July	80	10	16	76	2-	20-	508

TOTAL FORCE.

Total Force. — THE total force in the service afloat, corrected for time, in the year 1869, was 48,820; and the total number of cases of disease and injury entered on the sick list 59,326, which is in the ratio of 1,221·9 per 1,000, being a decrease compared with the preceding year equal to 30·5 per 1,000. In consequence of the defective nature of some returns from a few vessels, it has been necessary, in estimating the ratio of cases, to make a reduction from the Total Force to the extent of 270, and for that purpose, therefore, the force is taken as 48,550. The total mean force, however, is taken in estimating the invaliding and death rates, the returns in connection with which are complete. The average number of men sick daily was 2,256·4, which is in the ratio of 46·2 per 1,000, being a reduction, compared with the preceding year, equal to 2· per 1,000. The total number of persons invalided was 1,574, which is in the ratio of 32·2 per 1,000, and the total number of deaths was 484, which is in the ratio of 9·9 per 1,000. Compared with the preceding year there was a reduction in the invaliding rate to the extent of 2· per 1,000, but an increase in the ratio of mortality equal to 1· per 1,000. This increase was entirely attributable to the destructive influence of yellow fever in the West Indies. From disease alone the death-rate was 7·3 per 1,000. Had it not been from the fatal exposure of certain vessels to the yellow fever poison, it would have been only 6·2, which would have been below the ratio of mortality of 1868 to the extent of ·3 per 1,000.

The number of cases of disease and injury per man on the Home Station was ·9; Mediterranean, 1·4; North America and West Indies, 1·4; South East Coast of America, 1·5; Pacific, 1·4; West Coast of Africa and Cape of Good Hope, 1·6; East Indies, 1·8; China, 1·5; Australia, 1·8; and in the Irregular Force, 1·3. The average number of cases per man in the Total Force was 1·2, being precisely the same as in the previous year.

The lowest sick-rate was on the Home Station, and the highest on the China Station. The ratio per 1,000 of men sick daily on the Home Station was 38·3; on the Mediterranean, 53·; North America and the West Indies, 51·6; South East Coast of America, 44·; Pacific, 58·2; West Coast of Africa and Cape of Good Hope, 57·1; East

East Indies, 52·; China, 61·7; Australia, 55·9; and in the Irregular Force, 46·7. The average sick-rate of the Total Force was 46·2 per 1,000, which is a reduction, compared with the preceding year, equal to 2· per 1,000.

Total Force.
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Compared with the preceding year, the greatest reduction in the invaliding rate was on the East Indies Station, where it was equal to 21·7 per 1,000. This is readily accounted for by the fact that in 1868 the squadron on that station suffered severely from exposure in the Red Sea, in connection with the Abyssinian Expedition, and that an unusual amount of invaliding occurred in consequence. There was also a great reduction in the ratio of invaliding on the West Coast of Africa and Cape of Good Hope Station. It would perhaps be premature to attribute this to the amalgamation of the two stations, which occurred during this year. The reduction was very great, however, being to the extent of 19·5 per 1,000. Compared with the preceding year, there was an increase in the invaliding rate on the Home, Mediterranean, South East Coast of America, and Australian Stations, and in the Irregular Force; on all the remaining stations the rate was lower. The invaliding rate on the Home Station was 25·6 per 1,000; on the Mediterranean, 39·5; North America and West Indies, 34·2; South East Coast of America, 20·4; Pacific, 25·3; West Coast of Africa and Cape of Good Hope Station, 64·7; East Indies, 56·; China, 50·1; Australia, 32·8; and in the Irregular Force, 26·7. The total number invalided was 1,574, which is in the ratio of 32·2 per 1,000, being a decrease, compared with the preceding year, equal to 2· per 1,000.

Compared with the preceding year, there was an increase in the ratio of mortality on the North America and West Indies, South East Coast of America, Pacific, East Indies, and China Stations, and in the Irregular Force. The largest increase was on the North America and West Indies Station, where it was as much as 14·2 per 1,000. The ratio of mortality on the Home Station from disease alone was 5·1 per 1,000; from violence, 1·8; on the Mediterranean Station, from disease, 4·2; from violence, 3·7; North America and West Indies, from disease, 19·7; from violence, 3·7; South East Coast of America, from disease, 19·3; from violence, 2·1; Pacific, from disease, 9·4; from violence, 3·4; West Coast of Africa and Cape of Good Hope, from disease, 8·; from violence, 2·3; East Indies, from disease, 10·; from violence, 3·4; China, from disease, 10·1; from violence 3·4; Australia, from disease, 5·2; from violence, 3·9; and in the Irregular Force, from disease, 5·3; from violence, 2·6. The total death-rate from disease alone was 7·3, and from violence, 2·5. In 1868, the death-rate from disease alone was 6·5, and from violence, 2·4.

The total number of deaths was 484, of which 358 were from disease, and 126 from violence. The total death-rate was 9·9 per 1,000, which is an increase, compared with the preceding year, equal to 1· per 1,000.

Total Force. Compared with the preceding year, there was a reduction in the death-rate on the Home Station equal to .6 per 1,000; in the Mediterranean, to .7; West Coast of Africa and Cape of Good Hope, to 2.8; and on the Australian Station, to .4. There was an increase on the North American and West Indies Station, of 14.2 per 1,000; on the South East Coast of America, of 6.; Pacific, of 4.8; East Indies, of 1.6; China, of .6; and in the Irregular Force, of .5.

The following Table shows the ratio per 1,000 of mean force of all cases of disease and injury placed on the sick-list, and of mortality from the various classes of disease on the different station:—

CLASS OF DISEASE.	HOME.		MEDITERRANEAN.		NORTH AMERICAN and WEST INDIES.		SOUTH EAST COAST of AMERICA.		PACIFIC.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
I. General Diseases, Section A. :										
Eruptive Fevers - - - -	15.	.3	7.3	.7	1.7	.2	9.6	-	9.8	.8
Continued Fevers - - - -	10.9	-	36.	-	174.5	14.8	90.	4.3	30.	.4
Periodic Fevers - - - -	5.3	-	19.1	-	14.8	.5	116.3	-	7.2	-
Other Diseases - - - -	4.	.1	56.9	-	4.	.5	2.1	1.	.4	-
II. General Diseases, Section B. :										
Rheumatism - - - -	48.	-	63.9	-	79.4	-	66.6	1.	84.5	-
Syphilis - { Primary - - - -	42.1	-	38.5	-	35.1	-	6.4	-	75.9	-
- { Secondary - - - -	12.8	-	9.8	-	24.	-	7.5	-	42.4	1.7
Phthisis - - - -	5.5	.9	4.5	1.	4.5	.8	2.1	2.1	3.8	-
Other Diseases - - - -	3.5	.1	2.2	-	.8	-	1.	-	1.7	-
III. Diseases of the Nervous System, &c. -	24.7	.5	18.6	.2	31.7	.2	40.8	3.2	30.4	.8
IV. Diseases of the Circulatory System -	9.8	.9	4.	.5	13.1	.5	4.3	-	7.7	1.2
V. & VI. Diseases of the Absorbent System and Ductless Glands - - - -	6.2	-	5.2	-	18.5	-	9.6	-	15.4	-
VII. Diseases of the Respiratory System -	130.1	1.1	124.1	1.	135.7	1.1	196.7	3.2	191.4	1.7
VIII. Diseases of the Digestive System - -	114.6	.3	193.9	.5	216.8	-	363.7	-	272.5	1.2
IX. & X. Diseases of the Urinary and Generative Systems - - - -	59.3	.2	17.8	-	58.2	-	15.	-	63.9	.4
XI. Diseases of the Organs of Locomotion -	4.3	-	5.5	-	4.8	-	7.5	-	5.5	-
XII. & XIII. Diseases of the Cellular Tissue, &c. - - - -	204.3	-	422.1	.2	374.5	-	298.9	-	319.7	.4
Unclassed - - - -	8.	-	16.8	-	31.4	.5	13.9	-	12.4	.4
Wounds and Injuries - - - -	190.6	1.8	351.3	3.7	264.2	3.7	264.5	2.1	279.3	3.4

CLASS OF DISEASE.	WEST COAST of AFRICA and CAPE of GOOD HOPE.		EAST INDIES.		CHINA.		AUSTRALIA.		IRREGULAR.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
I. General Diseases, Section A.:										
Eruptive Fevers - - - -	-	-	18	-	14.6	1.6	7.8	1.3	2.4	.1
Continued Fevers - - - -	71.6	-	127.3	-	90.5	.2	15.7	-	31.2	.6
Periodic Fevers - - - -	127.1	1.7	74.3	-	37	.5	19.7	-	10.3	.2
Other Diseases - - - -	1.7	-	10	.8	2.8	-	1.3	-	4.5	-
II. General Diseases, Section B.:										
Rheumatism - - - -	120.8	.5	96.9	-	72.4	-	85.5	-	66.1	.1
Syphilis { Primary - - - -	21.3	-	60.4	-	91.4	-	18.4	-	42.4	-
{ Secondary - - - -	4	-	21.3	-	47.4	-	19.7	1.3	20.2	-
Phthisis - - - -	4.6	-	9.1	.4	5.1	1.8	7.8	-	6	.9
Other Diseases - - - -	3.4	-	5.2	-	9.4	.2	5.2	-	3.4	-
III. Diseases of the Nervous System, &c. -	49.7	-	54.3	2.1	35.6	2.4	55.2	2.6	34.2	.4
IV. Diseases of the Circulatory System -	4.6	1.7	16.5	2.6	6.6	.2	3.9	-	6.4	.8
V. & VI. Diseases of the Absorbent System and Ductless Glands - - - -	21.9	-	24.7	-	33.3	-	3.9	-	10	-
VII. Diseases of the Respiratory System -	130	.5	116.9	.4	108.6	.5	261.8	-	163.4	.9
VIII. Diseases of the Digestive System -	280.3	2.3	432.6	3.4	234.1	1.8	336.8	-	204.2	1
IX. & X. Diseases of the Urinary and Gene- rative Systems - - - -	82.6	-	52.6	-	93.6	-	71	-	67.2	-
XI. Diseases of the Organs of Locomotion -	7.5	-	3.9	-	8.6	-	1.3	-	5.7	-
XII. & XIII. Diseases of the Cellular Tissue, &c. - - - -	342.7	1.1	377.3	-	377.8	.2	457.8	-	343.8	-
Unclassed - - - -	36.9	-	36	-	30.4	.2	13.1	-	13.5	-
Wounds and Injuries - - - -	304	2.3	326.5	3.4	206.3	3.7	488.1	3.9	309.5	2.6

I. General Diseases.—Section A., or Febrile Group.

Under this head 4,020 cases of various forms of disease were entered on the sick-list, of which seventy were invalided and 108 proved fatal. Upwards of one-half of the mortality was caused by yellow fever. Nearly one-half of the total number of cases came under the head of simple continued fever.

Class I.
Sect. A.

Eruptive Fevers—Cases of eruptive fevers were met with on all the stations (with the exception of the West Coast of Africa and Cape of Good Hope), and in the Irregular Force.

Of eighty-two cases of small-pox, forty occurred on the China Station, where, as a rule, the disease prevails epidemically during the winter months of the year.

Total Force. — The remaining cases occurred on the Home, Mediterranean, Pacific, and East Indies Stations.

Scarlet fever was almost altogether confined to the Home Station. Two cases occurred in the Irregular Force.

Measles was extensively epidemic in one vessel on the Home Station. Cases also occurred in the Mediterranean, North American and West Indies, and East Indies Station, and in the Irregular Force.

Cases of typhus fever were met with on the Home, Mediterranean, South East Coast of America, and China Station. On the latter station the disease has latterly become prevalent in Japan, and nearly one-half of the total number of cases in the Force, were the result of infection at Yokohama.

Enteric fever was met with in the squadrons on the Home, Mediterranean, South East Coast of America, Pacific, East Indies, China, and Australian Stations, and in the Irregular Force. It is endemic at Malta and probably at most of the seaports on the Mediterranean Station, at Valparaiso on the Pacific Station, and in Farm Cove at Sydney, on the Australian Station.

Continued Fevers.—Simple continued fever was present on all the stations to a greater or less extent, and in the Irregular Force. The largest number of cases occurred on the North America and West Indies, and on the China Stations.

Yellow fever was epidemic in the West Indies and caused much mortality. It also prevailed on the South East Coast of America Station, at Rio de Janeiro, and several cases occurred in the vessel permanently stationed there. Cases also occurred in the Irregular Force, in vessels having intercourse with infected ports.

A single case of relapsing fever occurred on the Home Station.

Periodic Fevers.—Cases of ague occurred on all the stations and in the Irregular Force. The largest number of cases was on the Home Station where the disease was prevalent at Sheerness. In the Mediterranean squadron it chiefly occurs in the vessels employed in the River Danube. On the South East Coast of America Station, where a large number of cases occurred, the disease was attributable to exposure to the malarious influences of the River Paraguay, where one or two vessels were stationed during the year.

Remittent fever occurred in the squadrons on all the stations and in the Irregular Force. It was, as might be expected, most prevalent on the West Coast of Africa and Cape of Good Hope Station.

Other Diseases.—Of eight cases of cholera which presented themselves in the force, three occurred on the Home Station; one on the North American and West Indies Station; one on the South East Coast of America; two on the East Indies Station, and one in the Irregular Force.

Three

Three cases of hooping cough occurred on the Home Station.

Total Force

Cases of erysipelas occurred on all the stations (with the exception of North America and the West Indies), and in the Irregular Force. They were most numerous on the Home Station.

A single case of pyæmia occurred on the North America and West Indies Station.

Mumps occurred on several of the stations, but not to any extent.

There were altogether 251 cases of influenza, and of these 198 cases occurred on the Mediterranean Station, the remainder on the Home, South East Coast of America, and East Indies Stations, and in the Irregular Force.

II. General Diseases, Section B., or Constitutional Group.

Rheumatism.—Of this disease 3,095 cases were entered on the sick-list, which is in the ratio of 63·7 per 1,000 of force, being a decrease compared with the preceding year equal to 9·7 per 1,000. The average duration of each case was about seventeen days, and 144 men were on an average daily rendered ineffective by it.

The following Table shows the comparative prevalence of the diseases on the different stations during 1868 and 1869.

STATIONS.	RHEUMATISM,	
	1868.	1869.
Home - - - - -	51·	48·
Mediterranean - - - - -	95·8	63·9
North America and West Indies - - - - -	92·	79·4
South East Coast of America - - - - -	51·4	66·6
Pacific - - - - -	104·7	84·5
West Coast of Africa and Cape of Good Hope	112·	120·8
East Indies - - - - -	88·	96·9
China - - - - -	84·1	72·4
Australia - - - - -	110·4	85·5
Irregular - - - - -	90·5	66·1

It will be observed that as heretofore the disease was most prevalent on the Pacific, West Coast of Africa and Cape of Good Hope, East Indies, and China Stations.

Syphilis, Primary and Secondary.—Of the primary form of this disease 2,215 cases were under treatment, and 900 cases of secondary, the former being in the ratio of 45·6 and the latter of 18·5 per 1,000. Compared with the preceding year there was a reduction in the primary disease to the extent of 1·4, and in the secondary to that of ·1 per 1,000. On the Home Station there was an increase
384. I 1 2 in

Total Force. in the ratio of primary syphilis compared with the previous year to the extent of 5 per 1,000. Probably some amount of this increase may be referred to the numerous obstacles that have been thrown in the way of the efficient working of the Contagious Diseases Act. **Class II.** There was a great increase in the ratio of cases of syphilitic disease on the Pacific Station consequent upon more extensive intercourse with Valparaiso, which is a perfect hot bed of disease, no system of surveillance whatever being in existence there. There was a reduction to the extent of 9.1 per 1,000 of syphilitic disease on the China Station, due, doubtless, in great measure to the preventive system adopted at Hong Kong, and at Yokohama in Japan. **Sect. B.**

Phthisis Pulmonalis.—Two hundred and sixty five cases of this form of disease were entered on the sick-list, which is in the ratio of 5.4 per 1,000. This is slightly under the ratio of the preceding year.

III. Diseases of the Nervous System and Organs of the Special Senses.

Class III. Under this 1,473 cases of various forms of disease were entered on the sick-list, of which 193 were invalided, and thirty-nine proved fatal. Twenty-five persons were invalided for paralysis; fifty-two for epilepsy; twenty-six for insanity, and fifty for various affections of the eyes. Fourteen deaths were caused by apoplexy and fourteen by various forms of disease of the brain. There were four deaths from sunstroke.

IV. Diseases of the Circulatory System.

Class IV. Four hundred and twenty-one cases of disease were entered under this head, of which 183 were invalided, and forty-three proved fatal. Fifty-one persons were invalided for functional disease of the heart; ninety-five for organic disease; six for aneurism, and thirty-one for varicose veins. Of the deaths thirty-four were caused by organic disease of the heart, and nine by aneurism.

V. and VI. Diseases of the Absorbent System and Ductless Glands.

Classes V. and VI. Of 559 cases of glandular disease entered on the sick-list, 544 were sympathetic buboes. They were of a tedious character, and in this way caused considerable loss of service. The average duration of each case was about twenty-eight days, and forty-one men were on an average daily incapacitated by them. There was no mortality under this head, but three men were invalided for glandular diseases.

VII. Diseases of the Respiratory System.

Total Force.

Class VII.

Altogether 6,763 cases of various forms of diseases of this class were entered on the sick-list, of which sixty-nine were invalided and fifty-one proved fatal. The mortality from inflammatory affections of the lungs was nearly double that of the previous year. The largest ratio of cases of this class of disease was on the Australian Station, and the smallest on the China Station. The highest ratio of mortality was on the South East Coast of America, the lowest (with the exception of the Australian Station, on which there was no mortality from this disease) on the East Indies Station. Of the total number of cases, 5,957 were examples of common catarrh.

VIII. Diseases of the Digestive System.

Class VIII.

Of 9,099 cases of various forms of disease entered under this head, 173 were invalided, and thirty-nine terminated fatally. Of 187 cases of dysentery, seventeen proved fatal. In 1868, seventeen only proved fatal, out of 267 cases; while of 163 cases in 1867, twenty-three proved fatal. This merely indicates the varying severity of the disease in different years.

There were 246 cases of disease of the liver, of which twenty-six were invalided and nine proved fatal, chiefly from the formation of abscess.

The stations on which diseases of this class showed the highest ratios were the East Indies, the South East Coast of America, the Australian, the West Coast of Africa and Cape of Good Hope, and the Pacific Stations. The lowest ratio was on the Home Station.

IX. and X. Diseases of the Urinary and Generative Systems.Classes IX.
and X.

The total number of cases of disease entered under this head was 3,012, of which eighty-eight were invalided and seven proved fatal. Of the total number, 1,845 were cases of gonorrhœa, from which disease ninety-six were daily incapacitated for duty. Each case was, on an average, about nineteen days under treatment. Of the deaths, six were from disease of the kidneys, and one from extravasation of urine the result of stricture.

The highest ratio of cases of this class of diseases was on the China Station, the lowest on the South East Coast of America.

XI. Diseases of the Organs of Locomotion.

Class XI.

There were 252 cases of various forms of diseases of the bones and joints during the twelve months, of which forty-one were invalided. These affections, as a rule, were of an obstinate character, the average duration of each case being thirty days.

Total Force.

XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.

Classes XII. and XIII. Under this head 14,213 cases of various forms of disease were entered on the sick-list, of which 9,966 were boils or abscesses, and 3,302 ulcers. Of the total number of cases, ninety-one were invalided and seven proved fatal. Two hundred and forty-eight men were daily incapacitated for duty by boils or abscesses, and 196 by ulcers.

Of the invaliding cases seventeen were abscesses; sixty-six ulcers; and eight chronic skin disease. Five cases of psoas abscess, one of ulcer, and one of carbuncle, proved fatal.

Unclassed Diseases.

Under this head appear 641 cases of debility, chiefly dependent on climatic causes; eighty-five of delirium tremens; and thirty-four of poisoning, mostly alcoholic. Of these 151 cases of debility, four of delirium tremens, and two of poisoning were invalided; and two of debility, one of delirium tremens, and one of poisoning proved fatal.

Wounds and Injuries.

There were 11,490 cases of wounds and injuries of various kinds, of which seventy-four were invalided and thirty-nine proved fatal. The majority of the fatal cases were the result of falls from aloft. Of eighty-four cases of submersion entered on the sick-list, seventy-five were drowned.

The average number of men sick daily from General Diseases, Section A., or febrile group, was 159·5; from Section B., 524·3, more than one-half being affected with syphilis; from diseases of the nervous system and organs of the special senses, 72·2; of the circulatory system, 32·4; of the absorbent system and ductless glands, 42·6; of the respiratory system, 164·5; of the digestive system, 181·3; of the urinary and generative systems, 167·8; of the organs of locomotion, 20·4; of the cellular tissue and cutaneous system, 486·2; from unclassified diseases, 39·7; and from wounds and injuries of various kinds, 361·5. The total average number of men daily on the sick-list for various forms of disease and injury was 2256·4, which is in the ratio of 46·2 per 1,000, being a decrease compared with the preceding year equal to 2· per 1,000.

The

The following Table shows the ratio per 1,000 of force of cases entered on the sick-list, of invaliding and of mortality on the different stations during the year :—

STATIONS.	Ratio per 1,000 of Force of Cases placed on Sick-list.	Ratio per 1,000 of Force Invalided.	Ratio per 1,000 of Force Dead.
Home - - - -	900	25.6	6.9
Mediterranean - - -	1427.9	39.5	8.
North America and West Indies - - - -	1488.5	34.2	23.4
South-East Coast of America	1507.5	20.4	21.5
Pacific - - - -	1454.5	25.3	12.8
West Coast of Africa and Cape of Good Hope -	1615.6	64.7	10.4
East Indies - - - -	1859.5	56.	18.4
China - - - -	1506.3	50.1	13.6
Australia - - - -	1875.	32.8	9.2
Irregular - - - -	1345.5	26.7	8.

The following Table shows the increase and decrease in the ratios of cases, invalidings, and deaths in 1869, as compared with the preceding year :—

	Home.	Mediterranean.	North America and West Indies.	South-East Coast of America.	Pacific.	West Coast of Africa and Cape of Good Hope.	East Indies.	China.	Australia.	Irregular.	TOTAL.
					INCREASE.						
Cases - - -	8.	64.8	62.2	-	-	-	-	-	291.8	3.9	-
Invalidings - - -	3.7	12.7	-	.1	-	-	-	-	2.4	3.4	-
Deaths - - -	-	-	14.2	6.	4.8	-	1.6	.6	-	.5	1.
					DECREASE.						
Cases - - -	-	-	-	11.9	199.9	248.1	218.8	86.	-	-	30.5
Invalidings - - -	-	-	4.6	-	12.2	19.5	21.7	15.	-	-	2.
Deaths - - -	.6	.7	-	-	-	2.6	-	-	.4	-	-

Summary.—The total force, corrected for time, in 1869 was 48,820, and the average number of men sick daily 2,256, which is in the ratio of 46.2 per 1,000. In 1868, the ratio was 48.2.

There were 59,326 cases of disease and injury under treatment during the year, which is in the ratio of 1221.9 per 1,000, being a decrease compared with the preceding year equal to 30.5 per 1,000.

Total Force. Each case was on an average 13·8 days under treatment, and the total number of days' sickness divided amongst the Total Force gives an average of 16·6 days' sickness to each man. In 1868, the average was 17·6 days.

The total number invalided was 1,574, being in the ratio of 32·2 per 1,000, which is a decrease compared with the preceding year equal to 2· per 1,000.

The total number of deaths was 484, which is in the ratio of 9·9 per 1,000, being an increase compared with the preceding year equal to 1· per 1,000. The death-rate from disease alone was 7·3 per 1,000. In 1868 it was 6·5.

TABLE, No. 1.

SHOWING the Number of Cases of all Diseases and Injuries, and the Number Invalided and Dead, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:						
Small Pox - - - -	82	1·6	-	-	5	·1
Vaccinia - - - -	6	·1	-	-	-	-
Scarlet Fever - - -	26	·5	-	-	1	-
Measles - - - -	324	6·6	-	-	-	-
Typhus Fever - - -	20	·4	-	-	4	-
Enteric Fever - - -	47	·9	2	-	15	·3
Simple Continued Fever -	2,007	41·3	9	·1	8	·1
Yellow Fever - - -	118	2·4	-	-	57	1·1
Ague - - - -	474	9·7	19	·3	1	-
Remittent Fever - - -	511	10·5	37	·7	6	·1
Cholera - - - -	8	·1	-	-	5	·1
Diphtheria - - - -	-	-	-	-	1	-
Relapsing Fever - - -	1	-	-	-	-	-
Hooping Cough - - -	3	-	-	-	-	-
Erysipelas - - - -	112	2·3	2	-	2	-
Pyæmia - - - -	1	-	-	-	3	-
Mumps - - - -	29	·5	-	-	-	-
Influenza - - - -	251	5·1	1	-	-	-
II. General Diseases, Section B.:						
Rheumatism - - - -	3,095	63·7	112	2·2	3	-
Gout - - - -	87	1·7	2	-	-	-
Syphilis - { Primary	2,215	45·6	13	·2	-	-
	900	18·5	74	1·5	1	-
Tumour, Cystic - - -	2	-	-	-	-	-
Scrofula - - - -	43	·8	18	·3	-	-
Phthisis Pulmonalis -	265	5·4	207	4·2	51	1·
Epithelioma - - - -	2	-	-	-	1	-
Purpura and Anæmia - -	6	·1	1	-	2	-
Dropsy - - - -	33	·6	4	-	2	-
Diabetes - - - -	-	-	1	-	-	-
Scurvy - - - -	3	-	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses:						
Apoplexy - - - -	17	·3	2	-	14	·2
Stroke - - - -	87	1·7	2	-	4	-
Paralysis - - - -	52	1·	25	·5	5	·1
Vertigo - - - -	60	1·2	6	·1	-	-
Epilepsy - - - -	121	2·4	52	1·	1	-
Neuralgia - - - -	247	5·	5	·1	-	-
Insanity - - - -	51	1·	26	·5	-	-

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued*.

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
III. Diseases of the Nervous System, &c.—<i>continued</i>.						
Diseases of the Brain - - -	14	·2	5	·1	14	·2
Diseases of the Nervous System - - -	17	·3	2	—	1	—
Diseases of the Eye - - -	611	12·5	50	1·	—	—
Diseases of the Ear - - -	176	3·6	16	·3	—	—
Diseases of the Nose - - -	20	·4	2	—	—	—
IV. Diseases of the Circulatory System:						
Disease of the } Functional - - -	248	5·1	51	1·	—	—
Heart } Organic - - -	107	2·2	95	1·9	34	·6
Aneurism - - -	12	·2	6	·1	9	·1
Varicose Veins - - -	54	1·1	31	·6	—	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:						
Bubo (<i>Symp.</i>) - - -	544	11·2	2	—	—	—
Glandular Diseases - - -	15	·3	1	—	—	—
VII. Diseases of the Respiratory System:						
Diseases of the Larynx - - -	43	·8	3	—	—	—
Catarrh - - -	5,957	122·6	2	—	—	—
Hæmoptysis - - -	62	1·2	14	·2	3	—
Asthma - - -	39	·8	2	—	—	—
Other Diseases of the Lungs - - -	662	13·6	48	·9	48	·9
VIII. Diseases of the Digestive System:						
Cynanche - - -	1,881	38·7	1	—	—	—
Diseases of the Mouth, Teeth, &c. - - -	46	·9	4	—	—	—
Dyspepsia - - -	2,368	48·7	22	·4	1	—
Dysentery - - -	187	3·8	21	·4	17	·3
Diarrhoea - - -	3,204	65·9	13	·2	6	·1
Colic and Constipation - - -	624	12·8	1	—	—	—
Hæmorrhoids - - -	105	3·3	4	—	—	—
Hernia - - -	116	2·3	58	1·1	—	—
Worms - - -	152	3·1	—	—	—	—
Other Diseases of the Stomach, Intestines, &c. - - -	110	2·2	23	·4	7	·1
Diseases of the Liver - - -	240	5·	26	·5	9	·1

TABLE, No. 1.—Showing the Number of Cases of all Diseases, &c.—*continued.*

DISEASE OR INJURY.	Cases.		Invalided.		Dead.	
	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:						
Disease of the Kidneys - -	98	2	28	5	6	1
Diseases of the Bladder - -	30	6	4	—	—	—
Diseases of the Organs of Generation - - - -	39	8	15	3	—	—
Gonorrhœa - - - -	1,845	38	1	—	—	—
Stricture - - - -	180	3.7	22	4	1	—
Variocoele - - - -	27	5	12	2	—	—
Orchitis - - - -	793	16.3	6	1	—	—
XI. Diseases of the Organs of Locomotion:						
Diseases of the Bones, Joints, &c. - - - -	252	5.1	41	8	—	—
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:						
Phlegmon and Abscess - -	9,966	205.2	17	3	5	1
Ulcer - - - -	3,302	68	66	1.3	1	—
Erythema - - - -	70	1.4	—	—	—	—
Diseases of the Skin - -	566	11.6	8	1	—	—
Carbuncle - - - -	4	—	—	—	1	—
Scabies - - - -	303	6.2	—	—	—	—
Unclassed:						
Debility - - - -	641	13.2	151	3	2	—
Delirium Tremens - - -	85	1.7	4	—	1	—
Poisoning - - - -	34	7	2	—	1	—
Wounds and Injuries:						
Wounds, Injuries, &c. -	11,490	236.6	74	1.5	39	7
Burns and Scalds - - -	527	10.8	—	—	5	1
Hanging - - - -	1	—	—	—	—	—
Suicide - - - -	1	—	—	—	5	1
Asphyxia - - - -	—	—	—	—	1	—
Submersion and Drowning -	84	1.7	—	—	75	1.5
Not stated - - - -	—	—	—	—	1	—
TOTALS - - -	59,326	1,221.9	1,574	32.2	484	9.9

TABLE, No. 2.
 SHOWING the Average Force Corrected for Time; the Number of Cases; the Number of Days' Sickness; with the Ratios on the different Stations.

STATION.	Average Force.	Number of Cases of Disease and Injury.	Number of Cases per Man.	Number of Days' Sickness on Board.	Average Number of Men Sick Daily on Board.	Ratio per 1,000 of Force.	Number Discharged to Hospital.	Ratio per 1,000 of Force.	Number of Days' Sickness in Hospital.	Average Number of Men Daily in Hospital.	Ratio per 1,000 of Force.	Total Number of Days' Sickness.	Average Number of Men Sick Daily.	Ratio per 1,000 of Force.
Home - - -	22,100	19,892	·9	177,788	487·	22·	2,942	133·1	131,264	359·6	16·2	309,052	846·7	38·3
Mediterranean -	3,970	5,669	1·4	57,683	157·8	39·7	396	82·1	19,326	52·9	13·3	76,959	210·8	53·
North America and West Indies -}	3,500	5,210	1·4	47,409	129·8	37·	547	156·2	18,572	50·8	14·5	65,981	180·7	51·6
South-east Coast of America - -}	930	1,402	1·5	14,035	38·4	41·2	36	38·7	940	2·5	2·6	14,975	41·	44·
Pacific - - -	2,330	3,390	1·4	41,178	112·8	48·4	126	54·	8,398	22·9	9·8	49,571	135·8	58·2
West Coast of Africa and Cape of Good Hope - -}	1,730	2,795	1·6	26,341	72·1	41·6	236	136·4	9,738	26·6	15·3	36,079	98·8	57·1
East Indies - -	2,300	4,277	1·8	42,719	117·	50·8	60	26·	990	2·7	1·1	43,709	119·7	52·
China - - -	{ 3,480 3,760 }	5,242	1·5	57,469	157·4	41·9	538	143·4	27,007	73·9	19·7	84,476	231·4	61·7
Australia - -	760	1,425	1·8	14,618	40·	52·6	14	18·4	914	2·5	3·2	15,527	42·5	55·9
Irregular - -	7,450	10,024	1·3	90,404	247·6	33·2	508	68·1	36,858	100·9	13·5	127,262	348·6	46·7
TOTAL - - -	{ 48,850 48,890 }	{ 59,326 59,326 }	1·2	569,589	1560·5	31·9	5,383	109·2	254,002	695·8	14·2	823,591	2256·4	46·2

TABLE, No. 3.

SHOWING the Number of MEN INVALIDED and DEAD from DISEASE and INJURY on the different Stations, with the Ratios per 1,000 of Force.

STATION.	Number of Men Invalided for Disease.	Ratio per 1,000 of Force.	Number of Men Invalided for Injury.	Ratio per 1,000 of Force.	Total Number Invalided.	Ratio per 1,000 of Force.	Number of Deaths from Disease.	Ratio per 1,000 of Force.	Number of Deaths from Injury.	Ratio per 1,000 of Force.	Total Number of Deaths.	Ratio per 1,000 of Force.
Home - - -	541	24.4	25	1.1	566	25.6	113	5.1	40	1.8	153	6.9
Mediterranean - - -	153	38.5	4	1.	157	39.5	17	4.2	15	3.7	32	8.
North America and West Indies -	110	31.4	10	2.8	120	34.2	69	19.7	13	3.7	82	23.4
South-east Coast of America -	16	17.2	3	3.2	19	20.4	18	19.8	2	2.1	20	21.5
Pacific - - -	57	24.4	2	.8	59	25.3	22	9.4	8	3.4	30	12.9
West Coast of Africa and Cape of Good Hope.	107	61.8	5	2.8	112	64.7	14	8.	4	2.3	18	10.4
East Indies - - -	123	53.4	6	2.6	129	56.	23	10.	8	3.4	31	13.4
China - - -	182	48.5	6	1.6	188	50.1	38	10.1	13	3.4	51	13.6
Australia - - -	24	31.5	1	1.3	25	32.8	4	5.2	3	3.9	7	9.2
Irregular - - -	187	25.1	12	1.6	199	26.7	40	5.3	20	2.6	60	8.
TOTAL - - -	1,500	30.7	74	1.5	1,574	32.2	358	7.3	126	2.5	484	9.9

TABLE, No. 4.

SHOWING the Number of DAYS' SICKNESS from each DISEASE and from INJURIES, the Average Number of Men Sick Daily, with the Ratio per 1,000 of Force.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
I. General Diseases, Section A.:					
Small-Pox - - - -	1,544	984	2,528	6.9	.1
Vaccinia - - - -	55	-	55	.1	—
Scarlet Fever - - -	161	34	195	.5	—
Measles - - - -	426	8,724	9,150	25.5	.5
Typhus Fever - - -	344	180	524	1.4	—
Enteric Fever - - -	526	1,317	1,843	5.5	.1
Relapsing Fever - -	4	-	4	—	—
Simple Continued Fever -	14,335	7,772	22,107	60.5	1.2
Yellow Fever - - -	859	1,206	2,065	5.6	.1
Ague - - - -	3,828	892	4,720	12.9	.2
Remittent Fever - - -	6,952	2,348	9,300	25.4	.5
Cholera - - - -	12	-	12	—	—
Diphtheria - - - -	-	2	2	—	—
Hooping Cough - - -	21	162	183	.5	—
Mumps - - - -	263	101	364	.9	—
Influenza - - - -	1,732	790	2,522	6.9	.1
Erysipelas - - - -	1,321	1,587	2,908	7.9	.1
Pyæmia - - - -	8	-	8	—	—
II. General Diseases, Section B.:					
Rheumatism - - - -	31,633	20,969	52,602	144.1	2.9
Gout - - - -	796	207	1,003	2.7	—
Syphilis { Primary - - -	44,016	37,882	81,898	224.3	4.5
{ Secondary - - -	16,863	16,796	33,659	92.2	1.8
Tumour, Cystic - - -	16	-	16	—	—
Scrofula - - - -	825	1,206	2,031	5.5	.1
Phthisis Pulmonalis -	4,754	14,303	19,057	52.2	1.5
Epithelioma - - - -	79	57	136	.3	—
Purpura and Anæmia -	78	54	132	.3	—
Dropsy - - - -	228	736	964	2.6	—
Scurvy - - - -	54	-	54	.1	—
III. Diseases of the Nervous System and Organs of the Special Senses:					
Apoplexy - - - -	39	95	134	.3	—
Sunstroke - - - -	775	292	1,067	2.9	—
Paralysis - - - -	586	1,870	2,456	6.7	.1
Vertigo - - - -	360	463	823	2.2	—
Epilepsy - - - -	1,401	1,043	2,444	6.6	.1
Neuralgia - - - -	1,995	635	2,630	7.2	.1
Insanity - - - -	440	1,634	2,074	5.6	.1

TABLE, No. 4.—Showing the Number of Days' Sickness from each Disease, &c.—*contd.*

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
III. Diseases of the Nervous System, &c.—<i>continued.</i>					
Other Diseases of the Brain, &c.	173	1,000	1,173	3·2	—
Diseases of the Nervous System	97	81	178	·4	—
Diseases of the Eye - -	6,694	4,157	10,851	29·7	·6
Diseases of the Ear - -	1,567	635	2,202	6·	·1
Diseases of the Nose - -	351	172	523	1·4	—
IV. Diseases of the Circulatory System:					
Disease of the { Functional -	2,631	3,582	6,213	17·	·3
Heart { Organic - -	1,417	2,397	3,814	10·4	·2
Aneurism - - - -	357	377	734	2·	—
Varicose Veins - - -	608	500	1,108	3·	—
V. & VI. Diseases of the Absorbent System and Ductless Glands:					
Bubo (<i>Symp.</i>) - - -	11,525	3,596	15,121	41·4	·8
Glandular Diseases - -	210	242	452	1·2	—
VII. Diseases of the Respiratory System;					
Diseases of the Larynx - -	372	281	653	1·7	—
Catarrh - - - -	34,108	2,223	36,331	99·5	2·
Hæmoptysis - - - -	518	1,002	1,520	4·1	—
Asthma - - - -	424	183	607	1·6	—
Other Diseases of the Lungs -	9,056	11,992	21,048	57·6	1·1
VIII. Diseases of the Digestive System:					
Cynanche - - - -	11,478	1,970	13,448	36·8	7
Diseases of the Mouth, Teeth, &c. - - - -	364	100	464	1·2	—
Dyspepsia - - - -	12,281	2,530	14,811	40·5	·8
Dysentery - - - -	2,611	1,906	4,577	12·5	·9
Diarrhoea - - - -	15,190	2,375	17,565	48·1	·9
Colic and Constipation - -	2,564	282	2,846	7·7	·1
Hæmorrhoids - - - -	1,409	476	1,945	5·3	·1
Hernia - - - -	994	194	1,188	3·2	—
Worms - - - -	693	-	693	1·8	—
Other Diseases of the Stomach, Intestines, &c. - - -	1,090	2,412	3,502	9·5	·1
Diseases of the Liver, Spleen, &c.	3,368	2,031	5,399	14·7	3·

TABLE, No. 4.—Showing the Number of Days' Sickness from each Disease, &c.—*cont^d*.

DISEASE OR INJURY.	Number of Days' Sickness			Average Number of Men Sick Daily.	
	On Board.	In Hospital.	TOTAL.	Number.	Ratio per 1,000 of Force.
IX. & X. Diseases of the Urinary and Generative Systems:					
Diseases of the Kidneys - -	1,069	1,931	3,000	8·2	·1
Diseases of the Bladder - -	178	313	491	1·3	—
Gonorrhœa - - - -	23,598	6,140	35,038	95·9	1·9
Diseases of the Organs of Generation - - - -	684	1,209	1,843	5·	·1
Stricture - - - -	1,719	4,054	5,773	15·8	·3
Varicocèle - - - -	480	87	567	1·	—
Orchitis - - - -	10,442	4,211	14,653	40·	·8
XI. Diseases of the Organs of Locomotion: :					
Diseases of the Bones, Joints, &c.	3,519	3,936	7,455	20·4	·4
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:					
Phlegmon and Abscess - -	82,729	7,902	90,631	248·3	5·
Ulcer - - - -	52,522	19,235	71,757	196·5	4·
Erythema - - - -	692	185	877	2·4	—
Diseases of the Skin - -	7,001	3,381	10,382	28·4	·5
Carbuncle - - - -	74	78	152	·4	—
Scabies - - - -	2,940	813	3,753	10·2	·2
Unclassed:					
Debility - - - -	6,229	6,408	12,727	34·8	·7
Delirium Tremens - - -	424	881	1,305	3·5	—
Poisoning - - - -	229	299	528	1·4	—
Wounds, Injuries, &c.:					
Wounds, Injuries, &c. - -	104,795	21,002	125,887	344·8	7·
Burns and Scalds - - -	5,419	604	6,023	16·5	·3
Hanging - - - -	5	-	5	—	—
Suicide - - - -	6	-	6	—	—
Submersion and Drowning	46	56	102	·2	—
TOTALS - - -	569,589	254,002	823,591	2256·4	46·2

TABLE, No. 5.

SHOWING the Number INVALIDED on the several STATIONS.

CAUSE OF INVALIDING.	Home.	Mediterranean.	North America and West Indies.	South East Coast of America.	Pacific.	West Coast of Africa and Cape of Good Hope.	East Indies.	China.	Australia.	Irregular.	TOTAL.
I. General Diseases, Section A.:											
Enteric Fever - - - -	-	-	-	-	-	-	2	-	-	-	2
Simple Continued Fever - -	2	-	3	-	-	1	-	3	-	-	9
Ague - - - -	6	1	-	-	1	2	1	8	-	-	19
Remittent Fever - - - -	1	-	-	1	-	18	11	6	-	-	37
Influenza - - - -	1	-	-	-	-	-	-	-	-	-	1
Erysipelas - - - -	1	-	-	-	-	1	-	-	-	-	2
II. General Diseases, Section B.											
Rheumatism - - - -	26	17	13	-	6	10	12	10	5	13	112
Gout - - - -	1	-	-	-	-	1	-	-	-	-	2
Syphilis { Primary - - - -	5	1	1	-	2	-	1	3	-	-	13
{ Secondary - - - -	16	7	6	-	4	2	8	20	-	11	74
Scrofula - - - -	6	2	2	-	2	-	-	3	1	2	18
Phthisis Pulmonalis - - - -	89	20	7	1	10	6	12	23	4	35	207
Dropsy - - - -	1	1	-	-	-	-	-	-	-	2	4
Diabetes - - - -	-	1	-	-	-	-	-	-	-	-	1
Purpura and Anæmia - - - -	1	-	-	-	-	-	-	-	-	-	1
III. Diseases of the Nervous System and Organs of the Special Senses:											
Apoplexy - - - -	-	-	-	-	-	1	-	-	-	1	2
Sunstroke - - - -	-	-	-	-	-	-	1	1	-	-	2
Paralysis - - - -	15	1	1	-	-	2	-	2	-	4	25
Vertigo - - - -	-	-	2	1	1	-	-	-	1	1	6
Epilepsy - - - -	19	3	6	-	4	3	4	5	2	6	52
Neuralgia - - - -	-	-	-	-	-	-	-	3	1	1	5
Insanity - - - -	13	1	3	-	2	2	-	2	1	2	26
Other Diseases of the Brain, &c.	1	1	-	-	1	-	1	-	-	1	5
Diseases of the Nervous System	-	-	1	1	-	-	-	-	-	-	2
Diseases of the Eye - - - -	16	4	3	1	3	6	3	3	1	10	50
Diseases of the Ear - - - -	12	-	2	-	-	1	1	-	-	-	16
Diseases of the Nose - - - -	1	-	-	-	-	1	-	-	-	-	2

TABLE, No. 5.—Showing the Numbers Invalided on the several Stations—*cont^d*.

CAUSE OF INVALIDING.	Home.	Mediterranean.	North America and West Indies.	South Coast of America.	Pacific.	West Coast of Africa and Cape of Good Hope.	East Indies.	China.	Australia.	Irregular.	TOTAL.
IV. Diseases of the Circulatory System:											
Disease of the { Functional - - -	31	1	2	1	-	2	2	4	-	8	51
Heart, { Organic - - -	52	4	8	-	6	1	8	3	-	16	95
Aneurism - - - - -	2	-	-	-	-	-	-	1	-	3	6
Varicose Veins - - -	14	3	6	-	2	-	1	4	-	1	31
V. & VI. Diseases of the Absorbent System and Ductless Glands:											
Bubo, Symp. - - - -	1	-	-	-	-	1	-	-	-	-	2
Glandular Diseases - - -	1	-	-	-	-	-	-	-	-	-	1
VII. Diseases of the Respiratory System:											
Diseases of the Larynx - -	-	2	-	-	-	-	-	-	-	1	3
Catarrh - - - - -	2	-	-	-	-	-	-	-	-	-	2
Hæmoptysis - - - - -	2	1	3	-	1	1	3	1	-	2	14
Asthma - - - - -	-	-	-	-	-	1	-	-	1	-	2
Other Diseases of the Lungs -	19	6	4	1	3	1	2	6	-	6	48
VIII. Diseases of the Digestive System:											
Cynanche - - - - -	1	-	-	-	-	-	-	-	-	-	1
Diseases of the Mouth, Teeth, &c.	2	1	-	-	-	-	-	-	-	1	4
Dyspepsia - - - - -	5	1	1	3	1	-	2	7	1	1	22
Dysentery - - - - -	2	3	-	1	-	4	4	6	-	1	21
Diarrhœa - - - - -	1	1	1	-	-	-	-	9	-	1	13
Hernia - - - - -	39	-	5	-	1	1	2	3	-	7	53
Colic and Constipation - -	-	-	-	-	-	-	-	-	-	1	1
Hæmorrhoids - - - - -	-	-	-	-	-	-	2	1	-	1	4
Other Diseases of the Stomach, Intestines, &c. - - -	11	1	-	1	2	-	2	1	1	4	23
Diseases of the Liver, Spleen, &c.	4	2	3	-	1	-	7	4	-	5	26
IX. & X. Diseases of the Urinary and Generative Systems:											
Diseases of the Kidneys - -	13	4	1	-	-	1	1	4	-	4	28
Diseases of the Bladder - -	4	-	-	-	-	-	-	-	-	-	4
Diseases of the Organs of Generation - - - - -	8	3	-	-	-	-	-	1	-	3	15
Gonorrhœa - - - - -	-	-	-	-	-	-	-	1	-	-	1
Stricture - - - - -	7	1	1	-	1	3	4	1	-	4	22
Variocoele - - - - -	8	2	-	-	-	1	-	-	-	1	12
Orchitis - - - - -	2	2	-	-	-	1	1	-	-	-	6

TABLE, No. 5.—Showing the Number Invalided on the several Stations — *continued.*

CAUSE OF DEATH.	Home.	Mediterranean.	North America and West India.	South East Coast of America.	Pacific.	West Coast of Africa and Cape of Good Hope.	East India.	China.	Australia.	Irregular.	TOTAL.
VIII. Diseases of the Organs of Locomotion :											
Diseases of the Bones, Joints, &c.	19	9	-	-	-	2	-	3	2	6	41
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :											
Phlegmon and Abscess - -	2	4	4	-	-	2	-	2	-	3	17
Ulcer - - - - -	40	3	5	-	1	6	2	2	1	6	63
Diseases of the Skin - -	3	2	-	-	-	1	1	1	-	-	8
Unclassed :											
Debility - - - - -	18	30	18	4	2	21	22	23	2	11	151
Delirium Tremens - -	2	-	-	-	-	-	-	1	-	1	4
Poisoning - - - - -	1	-	-	-	-	-	-	1	-	-	2
Wounds and Injuries :											
Wounds, Injuries, &c. - -	25	4	10	3	2	5	6	6	1	12	74
TOTAL - - -	566	157	120	19	59	112	129	188	25	199	1,574

TABLE, No. 6.

SHOWING the Number of DEATHS on the several STATIONS.

CAUSE OF DEATH.	Home.	Mediterranean.	North America and West Indies.	South-east Coast of America.	Pacific.	West Coast of Africa and Cape of Good Hope.	East Indies.	China.	Australia.	Irregular.	TOTAL.	Ratio per Cent. of Deaths from Disease.	Ratio per Cent. of Deaths from Injury.	Ratio per Cent. of Deaths from all Causes.
I. General Diseases, Section A.:														
Small-Pox - - - -	-	-	1	-	-	-	-	4	-	-	5	1.3	-	1.
Scarlet Fever - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Typhus Fever - - -	1	-	-	2	-	-	-	1	-	-	4	1.1	-	.8
Enteric Fever - - -	5	3	-	2	2	-	-	1	1	1	15	4.1	-	3.
Simple Continued Fever - -	2	-	4	-	1	-	-	1	-	-	8	2.2	-	1.6
Ague - - - - -	-	-	-	-	-	-	-	1	-	-	1	.2	-	.2
Yellow Fever - - -	-	-	48	4	-	-	-	-	-	5	57	15.9	-	11.7
Remittent Fever - - -	-	-	2	-	-	3	-	1	-	-	6	1.6	-	1.2
Cholera - - - - -	1	-	-	1	-	-	2	-	-	1	5	1.3	-	1.
Pyæmia - - - - -	-	-	2	-	-	-	-	-	-	1	3	.8	-	.6
Diphtheria - - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Erysipelas - - - -	2	-	-	-	-	-	-	-	-	-	2	.5	-	.4
II. General Diseases, Section B.:														
Rheumatism - - - -	-	-	-	1	-	1	-	-	-	1	3	.8	-	.6
Syphilis, Secondary - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Phthisis - - - - -	22	4	3	2	4	-	1	7	1	7	51	14.2	-	10.5
Epithelioma - - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Purpura - - - - -	1	-	-	-	-	-	-	1	-	-	2	.5	-	.4
Dropsy - - - - -	2	-	-	-	-	-	-	-	-	-	2	.5	-	.4
III. Diseases of the Nervous System and Organs of the Special Senses:														
Apoplexy - - - - -	2	-	1	1	-	-	2	5	1	2	14	3.9	-	2.8
Sunstroke - - - - -	-	-	-	-	-	-	3	1	-	-	4	1.1	-	.8
Paralysis - - - - -	1	-	-	1	-	-	-	2	1	-	5	1.3	-	1.
Epilepsy - - - - -	-	-	-	-	-	-	-	1	-	-	1	.2	-	.2
Other Diseases of the Brain, &c. - - - - -	10	1	-	-	2	-	-	-	-	1	14	3.9	-	2.8
Diseases of the Nervous System - - - - -	-	-	-	1	-	-	-	-	-	-	1	.2	-	.2
IV. Diseases of the Circulatory System:														
Disease of the Heart, Organic - - - - -	12	2	2	-	3	3	6	-	-	6	34	9.4	-	7.
Aneurism - - - - -	8	-	-	-	-	-	-	1	-	-	9	2.5	-	1.8

TABLE, No. 6.—SHOWING the Number of Deaths on the several Stations—*continued.*

CAUSE OF DEATH.	Home.	Mediterranean.	North America and West India.	South-east Coast of America.	Pacific.	West Coast of Africa, and Cape of Good Hope.	East India.	China.	Australia.	Irregular.	TOTAL.	Ratio per Cent. of Deaths from Disease.	Ratio per Cent. of Deaths from Injury.	Ratio per Cent. of Deaths from all Causes.
VII. Diseases of the Respiratory System:														
Hæmoptysis - - -	1	-	-	-	-	-	-	1	-	1	3	.8	-	.6
Other Diseases of the Lungs	24	4	4	3	4	1	1	1	-	6	48	13.4	-	9.9
VIII. Diseases of the Digestive System:														
Dyspepsia - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Dysentery - - -	1	-	-	-	1	4	5	4	-	2	17	4.7	-	3.5
Diarrhœa - - -	1	-	-	-	-	-	2	-	-	2	5	1.3	-	1.
Other Diseases of the Stomach, &c. - - -	1	2	-	-	1	-	-	3	-	-	7	1.9	-	1.4
Diseases of the Liver, &c. -	3	-	-	-	1	-	1	-	-	4	9	2.5	-	1.8
IX. & X. Diseases of the Urinary and Generative Systems:														
Diseases of the Kidneys -	5	-	-	-	1	-	-	-	-	-	6	1.6	-	1.2
Stricture - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System:														
Phlegmon and Abscess -	1	1	-	-	1	2	-	-	-	-	5	1.3	-	1.
Ulcer - - -	-	-	-	-	-	-	-	1	-	-	1	.2	-	.2
Carbuncle - - -	1	-	-	-	-	-	-	-	-	-	1	.2	-	.2
Unclassed:														
Debility - - -	-	-	2	-	-	-	-	-	-	-	2	.5	-	.4
Delirium Tremens - -	-	-	-	-	1	-	-	-	-	-	1	.2	-	.2
Poisoning - - -	-	-	-	-	-	-	-	1	-	-	1	.2	-	.2
Wounds and Injuries:														
Wounds - - -	17	4	3	1	4	1	2	1	-	6	39	-	30.9	8.
Burns and Scalds - -	-	-	-	-	-	-	1	-	-	4	5	-	3.9	1.
Asphyxia - - -	-	-	-	-	-	1	-	-	-	-	1	-	.7	.2
Submersion and Drowning -	22	9	9	1	3	2	5	12	2	10	75	-	59.5	15.4
Suicide - - -	1	2	-	-	1	-	-	-	1	-	5	-	3.9	1.
Not stated - - -	-	-	1	-	-	-	-	-	-	-	1	-	.7	.2
TOTAL - - -	153	32	82	20	30	18	31	51	7	60	484	-	-	-

I N D E X
TO SHIPS AND STATIONS,
WITH
LIST OF MEDICAL OFFICERS.
1869.

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TO SHIPS AND STATIONS,

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N.B.—Where the Names of two or more Surgeons appear in one Ship, it is to be understood that these officers were serving in the vessel during different periods of the year; or, in some instances, that a Surgeon was borne in lieu of an Assistant Surgeon. When Assistant Surgeons only appear, it is to be understood that they were in charge.

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Aboukir -	North America and West Indies.	Year - -	J. Coogan; P. W. Rolston.	A. Robertson, M.D.
Achilles -	Home - -	8 July to 31 Dec.	J. C. Ingles - -	W. D. Wodsworth.
Adventure -	China - -	Year - -	P. M. Roe; E. A. Hudson (Acting); C. A. Lees, M.D.	E. Wheeler, M.D.
Agincourt -	Home - -	Year - -	T. J. Haran; W. E. O'Brien.	T. W. Hughes; J. Stewart, B.A.; G. G. Bothwell; G. E. Farr; W. J. Inman.
Algerine -	China - -	Year - -	- - - -	R. V. MacCarthy.
Antelope -	Mediterranean -	Year - -	- - - -	J. S. Levis, M.D.
Arethusa -	Irregular -	1 to 7 Jan. -	H. Harkan - -	D. R. Alcock.
Argus -	China - -	1 Jan. to 30 June	R. H. Carroll.	
	Irregular -	1 July to 3 Dec.		
Ariadne -	Irregular -	1 Jan. to 8 June	J. B. Holman, M.D. (S.S.); H. Hadlow (in lieu of A.S.).	R. S. P. Griffiths.
Asia - -	Home - -	Year - -	C. Forbes, M.D. (S.S.); F. M. Rayner (S.S.); C. Morton (in lieu of A.S.).	C. R. Enright; C. C. Mitchinson.
Avon - -	China - -	Year - -	- - - -	E. J. Sharood, M.D.; W. A. O'Connor, M.D.
Barracouta -	North America and West Indies.	Year - -	R. C. P. Lawrenson -	W. J. Wey.
Barrosa -	Irregular -	9 June to 31 Dec.	W. Anderson (a) -	R. Turner.
Basilisk -	Irregular -	1 Jan. to 13 Apr.	T. J. Wilson - -	E. W. Leet.
Beacon -	South East Coast of America.	Year - -	- - - -	J. T. Comerford, M.D.

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Bellerophon -	Home - -	Year - -	N. Littleton - -	A. Goodall, M.D.; W. H. Putsey.
Bermuda Floating Dock.	Irregular - -	18 June to 31 July	- - - -	E. Olive.
Black Prince -	Home - -	Year - -	G. Duncan, M.D. (S.S.); W. G. J. Ayre.	G. V. Hart, B.A.
Blanche -	Australia - -	Year - -	G. Molloy - -	J. C. Bailey.
Boscawen -	Home - -	Year - -	H. Slade; J. G. T. Forbes.	E. T. Lloyd; T. Conry.
Boxer - -	Irregular - -	1 Jan. to 30 June	- - - -	R. Potter, M.B.
Brilliant -	Pacific - -	1 July to 31 Dec.	- - - -	- - - -
Brisk - -	Home - -	Year - -	J. Christie, M.D.	M. O. Hurlstone.
Bristol - -	Irregular - -	1 to 19 Jan.	W. D. Smyth, M.D.	G. Maclean, M.A., M.D.
	Irregular - -	Year - -	A. Irwin; A. Rattray, M.D.	T. H. Knott.
Britannia -	Home - -	Year - -	A. W. W. Babington (S.S.); J. Caldwell (in lieu of A.S.).	- - - -
Bullfinch -	Irregular - -	1 Jan. to 31 Mar.	- - - -	J. Allen.
	East Indies - -	1 Apr. to 31 Dec.	- - - -	- - - -
Buzzard -	Home - -	Year - -	- - - -	W. M. Power.
Cadmus -	Irregular - -	23 Apr. to 8 June	W. Anderson (a) -	R. Turner.
Caledonia -	Mediterranean -	Year - -	J. G. T. Forbes; J. Buckley (in lieu of A.S.); J. Cotton, M.D. (S.S.).	J. Pringle, M.D.; R. Ninnis, M.D.; A. G. Delmege, M.D.
Cambridge -	Home - -	Year - -	M. Walling, M.D. -	E. Wheeler, M.D.; W. Galloway, M.D.; W. Grant, M.D.; J. H. Martin.
Cameleon -	Pacific - -	Year - -	F. A. Brice - -	A. W. Winn.
Caradoc -	Mediterranean -	1 Jan. to 9 June	- - - -	R. Hay, M.D.
Castor -	Home - -	Year - -	L. J. Monteith (S.S.)	- - - -
Challenger -	Australia - -	Year - -	A. Watson, M.D. (S.S.); D. Finucane, M.D.	H. N. Maclaurin, M.D., M.A.; I. Waugh, B.A., M.B.
Chanticleer -	Pacific - -	Year - -	R. Humphrys; M. Rodgers, M.D.	T. Bolster.
Charybdis -	Pacific - -	Year - -	J. C. Messer, M.D. -	T. Cann, M.D.
Cockatrice -	Mediterranean -	Year - -	- - - -	A. I. Folton, B.A., M.B.
Cormorant -	China - -	Year - -	L. Lucas - -	C. L. Ridout (in charge).
Cossack -	East Indies -	1 July to 31 Dec.	F. Piercy - -	T. L. Horner.
Cracker -	South East Coast of America.	Year - -	- - - -	A. Turnbull, M.D.
Crocodile -	Irregular - -	Year - -	J. Flanagan - -	G. Curtis.
Cruiser -	Mediterranean -	Year - -	A. M'Bride, M.D. -	W. H. Stewart, M.B.
Dædalus -	Home - -	Year - -	H. Edmonds, M.D. (S.S.).	- - - -
Danæ -	West Coast of Africa and Cape.	1 Jan. to 30 Sept.	J. F. Mitchell; R. R. Siccama.	J. H. Houston.
	Irregular - -	1 Oct. to 31 Dec.	- - - -	- - - -
Daphne -	East Indies -	Year - -	E. T. Mortimer; W. E. Dillon (Acting).	- - - -

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Dart - -	North America and West Indies.	Year - -	- - - -	M. A. Harte ; W. H. Charlesworth.
Dasher - -	Home - -	Year - -	- - - -	J. S. Barry ; W. S. Fisher, B.A., M.B.
Dauntless -	Home - -	Year - -	R. D. Pritchard (S.S.)	Geo. Murdoch, M.B. ; A. Colquhoun.
Dee ' - -	Home - -	28 Oct. to 31 Dec.	- - - -	W. Johnston, M.D.
Defence - -	Home - -	1 Jan. to 31 Mar.	F. F. Morgan - -	W. H. Charlesworth.
	North America and West Indies.	1 Apr. to 31 Dec.		
Donegal -	Home - -	1 Jan. to 30 June	C. F. A. Courtney ; J. B. Isaac ; R. Atkinson ; G. Murdoch, M.B.	
	Irregular - -	25 Nov. to 31 Dec.	J. R. Holman, M.D. (S.S.)	
Doris - -	North America and West Indies.	1 Jan. to 16 June	J. E. Dyas - -	G. V. Wright, M.D. ; T. Conry.
Dromedary -	West Coast of Africa and Cape.	1 Jan. to 24 Apr.	- - - -	T. St. J. Clerke, M.D.
Dryad - -	East Indies	Year - -	D. O'Connor, M.D.	
Duke of Wellington.	Home - -	Year - -	W. T. Wilson (S.S.) ; F. W. Blake, M.D.	C. Maclean, M.B. ; D. R. Alcock ; G. Kell.
Duncan -	Home - -	Year - -	J. Thomson (c), M.D. (S.S.) ; F. W. Davis (in lieu of A.S.) ; J. W. Reid, M.D. (S.S.) ; H. Trevan, M.D. (S.S.)	A. Mitchell, M.D. ; T. Milne, M.D.
			C. McShane (S.S.)	
Durham -	Home - -	Year - -	- - - -	W. Reid, M.D.
Dwarf - -	China - -	Year - -	- - - -	
Eagle - -	Home - -	Year - -	A. Murray (S.S.)	
Eclipse - -	North America and West Indies.	Year - -	R. L. B. Head ; W. F. C. Bartlett.	M. U. Greany, M.D.
Egmont -	South East Coast of America.	Year - -	T. McCarthy - -	T. N. W. Colahan.
Elk - -	Irregular - -	1 Jan. to 19 Apr.	- - - -	A. Mitchell, M.D. ; R. J. Sweetnam ; R. Grant, M.A., M.B.
	China - -	20 Apr. to 31 Dec.		J. Trimble ; J. Dunlop, M.D.
Endymion -	Mediterranean -	1 Jan. to 21 May	A. Fisher, M.D. -	
	Irregular - -	22 May to 31 Dec.		
Enterprise -	Mediterranean -	Year - -	P. W. Wallace, M.D.	R. B. O'Toole.
Euphrates -	East Indies -	Year - -	S. A. Willis, M.D.	J. N. Stone ; R. A. Mowll, M.D. ; T. St. J. Clerke, M.D.
Excellent -	Home - -	Year - -	J. Henderson, M.D. (S.S.)	J. Crawford.
				A. Scott, M.A., M.B.
Espoir - -	Irregular - -	8 Oct. to 8 Dec.	- - - -	
Favorito -	North America and West Indies.	1 Jan. to 25 Aug.	W. Edney - -	
Fisgard -	Home - -	Year - -	C. K. Ord, M.D. (S.S.) ; A. Robertson (in lieu of A.S.) ; J. D. Macdonald, M.D., F.R.S.	E. B. Broster ; H. D. Stanistreet.
Flirt - -	Home - -	Year - -	- - - -	S. Sweetnam.
Flora - -	West Coast of Africa and Cape.	Year - -	A. S. Pratt ; J. Murphy ; W. J. Eames.	T. D'A. Bromlow, M.D. ; T. C. Hickey, M.B. ; P. O'C. D'Oyle ; C. Maclean, M.B.

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Fly - -	West Coast of Africa and Cape.	Year - -	- - - -	E. W. Doyle.
Forte - -	East Indies -	Year - -	J. W. S. Meiklejohn, M.D.	W. E. Dillon; P. S. Warren; H. S. Smart, M.D.
Fox - -	Home - -	Year - -	- - - -	E. Olive; J. D. Smith, M.D.
Galatea -	Irregular - -	Year - -	J. Young, M.D. (S.S.); W. L. Powell (in lieu of A.S.); A. Watson, M.D. (S.S.)	W. H. Symes, M.B.
Ganges -	Home - -	Year - -	S. S. D. Wells; F. McAree (in lieu of A.S.); W. S. Roche (in lieu of A.S.)	W. H. Goode, M.B.; M. Trevan.
Gladiator -	Irregular - -	20 Aug. to 31 Dec.	J. Thomson.	C. R. Enright.
Greyhound -	South East Coast of America.	1 Jan. to 11 Sept.	A. Collins, M.B.	
Growler -	West Coast of Africa and Cape.	1 July to 31 Dec.	- - - -	A. G. Bain.
Hector - -	Home - -	Year - -	R. C. Scott (S.S.) -	R. Turner; J. A. Hatch.
Helicon -	Home - -	Year - -	- - - -	J. McK. Hollingsworth.
Hercules -	Home - -	Year - -	R. Irvine - -	W. P. Clapp; St. L. Mullen, M.D.
Hibernia -	Mediterranean -	Year - -	F. Negus (S.S.) -	H. A. Close.
Himalaya -	Irregular - -	Year - -	T. B. Purchas - -	B. H. McCurdy.
Hornet - -	Irregular - -	1 Jan. to 30 June	- - - -	J. B. Drew.
	China - -	1 July to 31 Dec.		
Icarus - -	China - -	Year - -	R. J. McMorris; C. G. Wodsworth (Acting).	E. A. Hudson.
Implacable -	Home - -	Year - -	F. Y. Toms - -	J. Whitaker, M.D.
Impregnable -	Home - -	Year - -	W. B. Fegen (S.S.); S. Wade.	J. Dunlop, M.D.; J. Crawford; J. Trimble.
Inconstant -	Home - -	12 Aug. to 31 Dec.	D. McEwan, M.D. -	A. McDonald, M.D.; M. F. Ryan.
Indus - -	Home - -	Year - -	S. Bowden, M.D. (S.S.)	G. W. L. Harrison; G. A. Campbell; M. F. Moylan; A. S. Crowdy; A. V. Smyth.
Industry -	West Coast of Africa and Cape.	1 April to 31 Dec.	- - - -	W. Redmond.
Investigator -	West Coast of Africa and Cape	1 Jan. to 22 Feb.	- - - -	P. O'C. D'Oyle.
Jackal - -	Home - -	Year - -	- - - -	T. L. Bickford; M. O. Hurlstone.
Jaseur - -	West Coast of Africa and Cape.	1 Jan. to 30 Sept.	- - - -	J. R. Burke, M.D.; T. D'A. Bromlow, M.D.
Jason - -	Mediterranean -	1 Oct. to 31 Dec.		
	North America and West Indies.	Year - -	W. H. Lloyd, M.D. -	J. L. Whitney.

SHIPS.	STATIONS.	P E R I O D.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Jumna - -	East Indies - -	Year - -	L. H. J. Hayne, M.D.	G. B. Benle, M.D.
Juno - -	Irregular - -	Year - -	D. Wilson; P. M. Roe.	J. H. Penberthy, M.D.; E. A. Hudson.
Lapwing - -	Home - -	1 Jan to 30 June	- - - -	D. McCarthy.
	North America and West Indies.	1 July to 31 Dec.		
Lee - -	West Coast of Africa and Cape.	1 Jan. to 31 Mar.	- - - -	T. H. Atkinson.
	Irregular - -	1 April to 30 June.		
	Mediterranean - -	1 July to 31 Dec.		
Leven - -	China - -	Year - -	- - - -	H. D. Stanistreet; E. J. Sharood, M.D.
Liberty - -	Home - -	Year - -	- - - -	W. Anderson (b).
Liffey - -	Irregular - -	Year - -	W. G. Hill - -	G. H. Madeley; W. H. Goode, M.B.
Linnet - -	South East Coast of America.	1 Jan. to 31 Mar.	- - - -	A. McDonald, M.D.
	Irregular - -	1 April to 3 July.		
Lion - -	Home - -	1 Jan. to 1 Nov.	W. Telfer - -	R. Grant, M.A. M.B.; G. Monteath, M.D.
Liverpool - -	Irregular - -	8 May to 31 Dec.	W. Mc K. Saunders, M.D.	J. Bradley; F. Buckle, M.D.
Lord Warden	Mediterranean - -	Year - -	H. Trevan, M.D. (S.S.); E. H. Evans (in lieu of A.S.); J. W. Reid, M.D. (S.S.)	T. Browne, M.D.
Lynx - -	West Coast of Africa and Cape.	Year - -	- - - -	W. P. M. Boyle.
Malabar - -	East Indies - -	Year - -	T. Colan, M.D. - -	R. L. Bett.
Malacca - -	Pacific - -	1 Jan. to 30 June	W. H. Cruice - -	S. Bamfield.
	Irregular - -	1 July to 27 Aug.		
Manilla - -	China - -	1 Jan. to 15 June	- - - -	C. G. Wodsworth.
Marines, Falkland Isles.	South East Coast of America.	Year - -	W. F. MacClinton, M.B.	
Marines, San Juan.	Pacific - -	Year - -	- - - -	I. Hanbury.
Martin - -	Home - -	Year - -	- - - -	J. Mulvany, M.D.
Medusa - -	Home - -	Year - -	- - - -	J. A. MacDonald, M.D.
Megara - -	Irregular - -	Year - -	- - - -	R. G. Bird.
Mersey - -	Home - -	Year - -	J. Jack (S.S.) - -	F. F. Flynn, M.B.; E. W. Leet.
Midge - -	Irregular - -	19 Feb. to 30 Sept.	- - - -	S. Terry.
	China - -	1 Oct. to 31 Dec.		
Minotaur - -	Home - -	Year - -	H. Gimlett, M.D. (S.S.)	C. Strickland; J. B. Nicoll, M.D.; J. Wilson.
Monarch - -	Home - -	13 May to 31 Dec.	W. Fasken, M.D. (S.S.)	A. B. Johnson; W. Galloway, M.D.; C. F. K. Murray, M.D.
Mullet - -	North America and West Indies.	Year - -	- - - -	P. Burgess, M.B.
Mutine - -	Irregular - -	1 Jan. to 30 Mar.	J. Martin, M.D. - -	W. Grant, M.D.
Myrmidon - -	West Coast of Africa and Cape.	Year - -	R. R. Siccan; J. F. Mitchell.	

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Nankin -	Home - -	Year - -	T. R. Pickthoru (S.S.); A. B. Mes-ser, M.D.	
Narcissus -	South East Coast of America.	1 Jan. to 17 July	J. Elliott (S.S.) -	J. S. Dobbyn; J. H. Martin.
Nassau -	South East Coast of America.	1 Jan. to 12 Aug.	S. Campbell, M.D.	
Nereus -	Pacific - -	Year - -	- - - -	Geo. Mair, M.A., M.D.
Newport -	Mediterranean -	Year - -	- - - -	R. Cannon.
Niobe -	North America and West Indies.	Year - -	W. F. C. Bartlett; R. L. B. Head.	
Northumber-land.	Home - -	Year - -	S. Clift - - -	E. Mulcahy; G. B. Murray.
Nymphæ -	East Indies -	Year - -	J. Noble.	
Oberon -	South East Coast of America.	1 Jan. to 20 July	- - - -	A. A. Mullin.
Ocean -	China -	Year - -	J. Rorie - - -	S. Kellett; J. Mc-Carthy.
Octavia -	East Indies -	1 Jan. to 31 Mar.	D. M. Shaw - -	H. N. M. Sedgwick; M. F. Ryan.
Orontes -	Irregular - -	1 April to 22 July	R. Edwardes - -	F. Buckle, M.D.; A. G. Robertson, M.B.
Orwell -	Irregular - -	9 Jan. to 31 Dec.	- - - -	J. Lambert; A. Mit-chell, M.D.
Pallas -	Home - -	Year - -	- - - -	A. G. Colquhoun.
Pandora -	West Coast of Africa and Cape.	1 Jan. to 9 Oct.	R. Creighton - -	N. T. Connolly.
Pearl -	China - -	Year - -	- - - -	
Pembroke -	Home - -	Year - -	E. Waller, M.D.; B. Gregory (Acting).	E. V. De Méric.
Penelope -	Home - -	Year - -	T. Seccombe, M.D. (S.S.); T. J. Haran.	J. Whyte, M.B.; T. Redfern, M.D.; J. Stewart, M.B.
Perseus -	Home - -	Year - -	W. E. O'Brien; T. Seccombe, M.D. (S.S.); R. W. Beaumont (S.S.).	G. G. Bothwell; T. Redfern, M.D.
Peterel -	China - -	Year - -	A. Cooper - - -	J. Craw, M.D.
Philomel -	Irregular - -	1 Jan. to 30 June	J. N. J. O'Malley.	
Phœbe -	Cape and West Coast of Africa.	1 July to 13 Oct.	- - - -	J. G. Clarke.
Pioneer -	North America and West Indies.	Year - -	J. Ward (S.S.) -	D. McN. Johnston, M.D.; F. McCle-ment, M.D.
Plover -	North America and West Indies.	1 Jan. to 30 June	- - - -	A. Gorham, M.D.
President -	Irregular - -	1 July to 31 Dec.	- - - -	V. Duke.
Prince Consort	West Coast of Africa and Cape.	Year - -	- - - -	
Princess Char-lotte.	West Coast of Africa and Cape.	Year - -	H. M. Speer (S.S.).	W. McMahon, M.D.; J. K. Conway, M.D.
Pysche -	Home - -	Year - -	G. Mason, M.D. -	W. J. Thomason.
	Mediterranean -	Year - -	- - - -	T. Warden, M.D.

SHIPS.	STATION.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Pylades -	Pacific - - South East Coast of America.	1 Jan. to 30 Sept. 1 Oct. to 31 Dec.	J. Fisher - - -	J. Shields.
Racoon -	Irregular - -	Year - - -	P. Mansfield, M.D. -	J. Wilson; S. Sexton.
Rapid -	Mediterranean -	Year - - -	G. W. J. Sutherland, M.A.	C. G. Langdon.
Rattlesnake	West Coast of Africa and Cape.	Year - - -	J. S. Adams - -	J. M. Hunter; P. O'C. D'Oyle.
Reindeer -	Pacific - -	Year - - -	E. Dann, M.D. (Acting).	J. B. Isaac; J. Rod- gers.
Resistance -	Home - -	1 July to 31 Dec.	C. F. A. Courtney -	
Revenge	Home - - Irregular - - Irregular - -	1 Jan. to 11 Mar. 21 Apr. to 27 Sept. 16 Nov. to 31 Dec.	W. Crawford; J. Cot- ton, M.D. (S.S.); J. G. T. Forbes; J. Buckley (in lieu of A.S.); D. L. Mor- gan, M.D. (S.S.); J. T. U. Bremner, M.D. (S.S.).	J. E. Sanderson, B.A., M.D.; B. Ninnis, M.D.; A. Delmege, M.D.; J. Pringle, M.D.; J. Rodgers; J. B. Ni- coll, M.D.; R. S. P. Griffiths; M. Tre- van; E. T. Lloyd.
Rifleman -	China - -	1 July to 24 Aug.	- - -	W. A. O'Connor, M.D.
Rinaldo -	China - -	Year - - -	W. G. Ridings -	R. Beamish, M.A., M.B.
Ringdove -	Irregular - -	1 Jan. to 31 Mar.	- - -	J. Parker.
	Pacific - -	1 April to 31 Dec.	- - -	A. Brend.
Rocket -	Irregular - -	22 Nov. to 31 Dec.	- - -	W. J. Morier, M.B.
Rodney -	China - -	Year - - -	G. B. Hill (S.S.); H. Fegan, M.D. (in lieu of A.S.); L. Lucas (additional).	J. A. Gaven; C. L. Ridout.
			T. Roche - -	G. Price, M.D.
			A. Adams (S.S.) -	
Rosario -	Australia - -	Year - - -	D. L. Morgan, M.D. (S.S.); R. C. P. Lawrenson (in lieu of A.S.); W. L. Gordon, M.D. (S.S.).	J. Rodgers; J. B. Nicoll, M.D.; R. S. P. Griffiths.
Royal Ade- laide.	Home - -	Year - - -	H. Loney (S.S.); A. J. Ireland, M.D. (in lieu of A.S.)	R. Atkinson.
Royal Alfred	North America and West Indies.	Year - - -	W. H. Clarke - -	T. Browne, M.D.; H. S. Trail; W. C. J. Holmes; T. T. Ri- ordan.
Royal George	Home - -	Year - - -	C. H. Slaughter -	J. W. Fisher, M.D.
Royal Oak -	Mediterranean -	Year - - -	P. Digan, M.D. (S.S.)	W. D. Wodsworth.
			W. Hoggan (S.S.) -	W. J. Morier, M.B.; J. S. Dobbryn.
Royalist -	North America and West Indies.	Year - - -	- - -	W. Fetherstonhaugh.
St. George -	Home - -	1 Jan. to 30 June	- - -	E. Meade.
St. Vincent -	Home - -	Year - - -	W. D. Longfield (Act- ing); R. Eustace.	
Salamis -	China - -	Year - - -	J. T. Gabriel.	
Satellite -	Pacific - -	Year - - -	W. Carmichael, M.D.	
Scorpion -	Home - -	Year - - -	C. Keenan - -	J. Whyte, M.B.
Scout -	Irregular - -	1 Jan. to 5 May	- - -	J. C. Dunlop; R. Hay, M.D.
Scylla -	Irregular - -	15 Apr. to 31 Dec.	- - -	
Seulark -	Home - -	Year - - -	- - -	

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Serapis -	Irregular - -	Year - -	J. Breakey, M.D. -	A. G. Bain; E. W. Coleman, M.D.
Seringapatam	West Coast of Africa and Cape.	Year - -	- - - -	R. J. Sweetnam; P. O'C. D'Oyle.
Serpent -	China - -	1 Jan. to 31 Mar.	A. Mullan (Acting Surgeon and Surgeon).	
	Irregular - -	1 Apr. to 10 Aug.		
Sheerness Reserve.	Home - -	Year - -	J. Lilburne, M.D. (S.S.); R. Mungle (in lieu of A.S.); F. McAree (in lieu of A.S.).	W. Graham.
Sirius -	Irregular - -	Year - -	A. McKenna, M.D. -	E. L. Moss, M.D.
Sirius -	Irregular - -	23 July to 30 Sept	M. Magill - -	J. C. Dunlop.
	West Coast of Africa and Cape.	1 Oct. to 31 Dec.		
Slaney -	China - -	Year - -	- - - -	W. F. Ryall.
Sparrowhawk	Pacific - -	Year - -	P. Comrie.	
Speedwell -	West Coast of Africa and Cape.	1 Jan. to 31 Mar.	- - - -	W. B. Fletcher.
	South East Coast of America.	1 Apr. to 31 Dec.		
Spider -	South East Coast of America.	1 Jan. to 1 May	- - - -	H. S. Lauder.
Spiteful -	East Indies -	1 Jan. to 30 June	D. Hilston, M.D.	
	Irregular - -	1 July to 23 Sept.		
Squirrel -	Home - -	Year - -	- - - -	J. F. Parr; A. Scott, M.A., M.B.
Star -	East Indies -	Year - -	W. R. Bennett, M.D.	
Sylvia -	China - -	Year - -	F. H. Moore; E. V. de Méric (Acting).	R. V. MacCarthy (in charge).
Tamar -	Irregular - -	15 Sept. to 31 Dec.	G. F. Banks - -	J. F. Parr.
Teazer -	Irregular - -	23 Nov. to 31 Dec.	- - - -	J. S. Barry.
Terrible. -	Home - -	1 Jan. to 10 May	W. Fasken, M.D. (S.S.)	J. A. Hatch.
	Irregular - -	12 June to 31 Dec.	- - - -	G. W. L. Harrison.
Terror -	North America and West Indies.	Year - -	W. Richardson -	J. Halpin; W. J. Wey.
Thistle -	Irregular - -	18 Oct. to 22 Nov.	- - - -	J. S. Barry,
Topaze -	Pacific - -	1 Jan. to 30 June	J. L. Palmer - -	C. B. Greenfield, M.B.
	Irregular - -	1 July to 1 Sept.		
Trafalgar -	Home - -	1 Jan. to 20 Nov.	T. J. Breen (S.S.) -	W. Y. Paton, M.B.
Trincomalee -	Home - -	Year - -	J. I. Crawford, M.D. (S.S.); A. Irwin.	
Trinculo -	Mediterranean -	Year - -	- - - -	W. Yarde, M.D.

SHIPS.	STATIONS.	PERIOD.	NAMES OF MEDICAL OFFICERS.	
			Staff Surgeons and Surgeons.	Assistant Surgeons.
Urgent -	Irregular -	1 Jan. to 20 Aug.	F. H. Blaxall, M.D. (S.S.)	G. Kell.
Valiant -	Home -	Year -	C. D. Shephard (S.S.); G. V. McDonogh, M.D. (in lieu of A.S.); W. Smith, M.D. (S.S.)	
Valorous -	Irregular -	12 to 31 Dec.	T. G. Wilson -	T. O'Sullivan, M.D.
Vestal -	North America and West Indies.	Year -	C. McConaghy (acting); A. Robertson, M.D. (acting).	M. U. Greany, M.D. (in charge).
Victoria and Albert.	Home -	Year -	J. M. Minter, M.D. (Dep. Insp. Gen.)	
Victory -	Home -	1 Jan. to 28 Feb.	F. M. Rayner (S.S.)	A. G. Robertson, M.B.; W. C. J. Holmes.
Vindictive -	West Coast of Africa and Cape.	- - -	- - -	J. Robertson; W. J. Rankin, M.D.
Virago -	Australia -	Year -	A. Crosbie, M.D.	
Warrior -	Home -	Year -	J. C. Walsh (S.S.); W. J. Hamilton, M.D. (in lieu of A.S.).	R. A. Mowll, M.D.
Winchester -	Home -	Year -	W. Ross, M.D. (S.S.); W. Lawrance (S.S.).	
Wizard -	Mediterranean -	Year -	- - -	D. MacIver, M.D.
Zealous -	Pacific -	Year -	J. Cockin (S.S.) -	J. Simpson, M.D.; A. Brend.
Zebra -	China -	Year -	J. W. Leahy -	C. L. Ridout.

A P P E N D I X.

MEDICAL AND SURGICAL REPORTS

For the Year 1869,

OF THE

MARINE DIVISIONS

AT

FORT CUMBERLAND and EASTNEY.

PORTSMOUTH (FORTON).

PLYMOUTH, and

CHATHAM.

MEDICAL AND SURGICAL REPORT

OF THE ROYAL MARINE ARTILLERY DIVISION

AT

EASTNEY BARRACKS AND FORT CUMBERLAND,

Between the 1st January and the 31st December 1869.

By Staff Surgeon J. JENKINS, C.B., M.D.

		Number remaining from last Return.	Received since.	Discharged cured.	Hospital.	Invalided.	Dead.	Number now in Hospital.
I. General Diseases, Section A.	Measles - - - -	-	2	2	-	-	-	-
	Scarlet Fever - - -	-	1	-	1	-	-	-
	Enteric Fever - - -	1	2	-	3	-	-	-
	Simple Continued Fever -	-	8	5	3	-	-	-
	Ague - - - - -	-	2	-	2	-	-	-
	Cholera - - - - -	-	2	1	-	-	1	-
	Erysipelas - - - -	-	1	-	1	-	-	-
II. General Diseases, Section B.	Rheumatism - - - -	2	97	71	24	1	-	3
	Gout - - - - -	1	3	3	-	-	-	1
	Syphilis, Primary - - -	3	159	97	56	-	-	9
	Syphilis, Secondary - -	1	38	15	18	1	-	5
	Hæmoptysis - - - -	3	1	2	2	-	-	-
	Phthisis Pulmonalis - -	-	22	6	15	1	-	-
	Parotitis - - - - -	1	1	2	-	-	-	-
	Purpura - - - - -	1	1	2	-	-	-	-
III. Diseases of the Nervous System, and Organs of the Special Senses.	Apoplexy - - - - -	-	1	-	1	-	-	-
	Paralysis - - - - -	-	5	3	-	2	-	-
	Convulsions from Drink -	-	1	1	-	-	-	-
	Epilepsy - - - - -	1	5	3	-	3	-	-
	Neuralgia - - - - -	-	10	7	2	1	-	-
	Vertigo - - - - -	-	8	7	1	-	-	-
	Insanity - - - - -	-	2	-	2	-	-	-
	Syncope - - - - -	-	2	2	-	-	-	-
	Fistula Lachrymalis - -	-	2	2	-	-	-	-
	Ophthalmia - - - - -	-	23	19	2	2	-	-
	Cataract - - - - -	-	1	-	-	1	-	-
	Diseases of the Ear - -	-	9	6	1	2	-	-
	Diseases of the Nose - -	-	3	3	-	-	-	-
IV. Diseases of the Circulatory System.	Diseases of Functional the Heart { Organic	-	31	18	13	-	-	-
	Aneurism - - - - -	-	42	15	26	1	-	-
	Varicose Veins - - - -	-	4	-	3	-	1	-
	- - - - -	-	3	2	1	-	-	-
V. & VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - - - -	-	8	3	3	-	-	2
	Adenitis - - - - -	-	3	3	-	-	-	-
VII. Diseases of the Respiratory System.	Catarrh - - - - -	8	163	162	6	-	-	3
	Bronchitis - - - - -	-	19	17	2	-	-	-
	Asthma - - - - -	-	4	2	1	1	-	-
	Pneumonia - - - - -	-	2	1	1	-	-	-
	Aphonia - - - - -	-	1	-	-	1	-	-

MEDICAL and Surgical Report of the Royal Marine Artillery, &c.—*continued.*

		Number remaining from last Return.	Received since.	Discharged cured.	Hospital.	Invalided.	Dead.	Number now in Hospital.
VIII. Diseases of the Digestive System.	Cynanche - - - -	1	60	56	5	-	-	-
	Icterus - - - -	-	11	4	6	-	1	-
	Melena - - - -	-	1	1	-	-	-	-
	Dyspepsia - - - -	6	71	73	4	-	-	-
	Dyspepsia è potù - -	-	32	30	-	-	-	2
	Dysentery - - - -	-	3	1	2	-	-	-
	Diarrhœa - - - -	2	59	61	-	-	-	-
	Colic and Constipation -	-	15	15	-	-	-	-
	Hæmorrhoids - - - -	-	3	1	2	-	-	-
	Condylomata Ani - - -	-	3	3	-	-	-	-
	Hernia - - - -	-	8	-	-	8	-	-
	Worms - - - -	-	8	8	-	-	-	-
	Ptyalism - - - -	-	1	1	-	-	-	-
	Hepatitis - - - -	-	15	9	6	-	-	-
	Fistula in Ano - - - -	-	4	3	1	-	-	-
	Prolapsus Ani - - - -	-	2	1	1	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	1	-	1	-	-	-
	Incontinence of Urine -	-	2	2	-	-	-	-
	Gonorrhœa - - - -	2	224	129	90	-	-	7
	Balanitis - - - -	1	1	1	1	-	-	-
	Hematuria - - - -	-	1	1	-	-	-	-
	Stricture - - - -	-	6	2	4	-	-	-
	Varicocele - - - -	-	2	1	-	1	-	-
	Oorchitis - - - -	-	19	15	4	-	-	-
	Hydrocele - - - -	-	1	-	1	-	-	-
XI. Diseases of the Organs of Locomotion.	Diseases of the Bones -	-	3	1	1	1	-	-
	Diseases of the Joints -	-	1	1	-	-	-	-
	Diseases of the Bursæ -	-	10	8	1	1	-	-
	Fibro-cellular Tumour -	-	1	-	1	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess -	6	137	139	4	-	-	-
	Ulcer - - - -	2	57	50	5	2	-	2
	Other Skin Diseases -	2	31	26	7	-	-	-
	Scabies - - - -	-	33	31	-	-	-	2
Unclassed - - -	Debility - - - -	-	14	14	-	-	-	-
	Sea-sickness - - - -	-	1	-	-	1	-	-
	Delirium Tremens - - -	-	1	-	1	-	-	-
Wounds and Injuries -	Wounds - - - -	-	82	79	1	1	-	1
	Fractures - - - -	-	8	4	2	2	-	-
	Dislocations - - - -	-	7	6	-	1	-	-
	Sprains - - - -	-	45	41	3	-	-	1
	Contusions - - - -	1	70	67	1	-	-	3
	Burns and Scalds - - -	1	1	2	-	-	-	-
	Submersion and Drowning -	-	1	-	-	-	1	-
	Abrasions - - - -	1	12	13	-	-	-	-
TOTAL - - -		47	1,760	1,382	345	35	4	41

CASES of all Men Dead or Invalided - - -

Length of Service in Years.	Company to which belonging.	Cases.	Age.	Quality.	Cause of Death or Invaliding.	Date of Death or Invaliding.	Whither Discharged.	Date of Discharge.
17	16	Case 1	40	Gunner -	Aneurism - - -	30 Jan. -	Dead -	30 Jan. -
9	17	" 2	31	" -	Cholera - - -	11 March	" -	11 March
4 ⁴ / ₁₃	12	" 3	26	" -	Drowning - - -	10 July -	" -	10 July -
8	5	" 4	32	" -	Icterus - - -	26 Dec. -	" -	26 Dec. -
8	18	" 5	28	" -	Syphilis, Secondary - - -	8 Jan. -	Invalided	19 Jan. -
6	9	" 6	29	" -	Hernia - - -	8 Jan. -	"	2 March
11	1	" 7	32	" -	Deafness - - -	5 Feb. -	"	16 Feb. -
12	17	" 8	31	" -	Ulcer - - -	5 Feb. -	"	16 Feb. -
1	18	" 9	25	" -	Hernia - - -	5 March	"	16 March
12	6	" 10	31	" -	Burnitis - - -	5 March	"	16 March
2	5	" 11	20	" -	Epilepsy - - -	9 April -	"	20 April -
13	12	" 12	32	" -	Phthisis - - -	7 May -	"	18 May -
4	11	" 13	22	" -	Epilepsy - - -	7 May -	"	18 May -
0 ² / ₁₃	14	" 14	27	" -	Dislocation - - -	7 May -	"	18 May -
2	2	" 15	22	" -	Hernia - - -	4 June -	"	15 June -
6 ³ / ₁₃	5	" 16	25	" -	Gunshot wound - - -	9 July -	"	20 July -
7	6	" 17	25	" -	Paralysis - - -	9 July -	"	20 July -
4	9	" 18	34	" -	Cataract - - -	9 July -	"	20 July -
3	11	" 19	28	" -	Paralysis - - -	9 July -	"	20 July -
2	6	" 20	21	" -	Ophthalmia - - -	9 July -	"	20 July -
10	9	" 21	31	" -	Fracture - - -	9 July -	"	20 July -
0 ³ / ₁₃	2	" 22	21	" -	Epilepsy - - -	9 July -	"	20 July -
6 ⁴ / ₁₃	10	" 23	25	" -	Cardiac disease, syphilitic - - -	9 July -	"	20 July -
4 ⁴ / ₁₃	11	" 24	23	" -	Rheumatism - - -	9 July -	"	20 July -
6	8	" 25	29	Bombardier	Neuralgia - - -	6 Aug. -	"	18 Aug. -
0 ² / ₁₃	15	" 26	23	Gunner -	Ophthalmia - - -	6 Aug. -	"	18 Aug. -
5	8	" 27	24	" -	Aphonia - - -	3 Sept. -	"	14 Sept. -
2 ⁶ / ₁₃	3	" 28	21	" -	Disease of ear - - -	3 Sept. -	"	14 Sept. -
9 ⁵ / ₁₃	5	" 29	30	" -	Asthma - - -	3 Sept. -	"	14 Sept. -
3 ⁴ / ₁₃	16	" 30	26	" -	Hernia - - -	3 Sept. -	"	14 Sept. -
10	15	" 31	30	" -	Disease of bone - - -	3 Sept. -	"	14 Sept. -
6	6	" 32	27	" -	Hernia - - -	8 Oct. -	"	20 Oct. -
10	11	" 33	29	" -	Hernia - - -	8 Oct. -	"	30 Oct. -
2	6	" 34	21	" -	Varicocele - - -	8 Oct. -	"	27 Oct. -
2 ² / ₁₃	16	" 35	21	" -	Sea-sickness - - -	8 Oct. -	"	20 Oct. -
6 ³ / ₁₃	3	" 36	21	Bugler -	Hernia - - -	5 Nov. -	"	17 Nov. -
10	6	" 37	28	Gunner -	Ulcer - - -	5 Nov. -	"	17 Nov. -
2 ² / ₁₃	15	" 38	30	" -	Fracture - - -	5 Nov. -	"	17 Nov. -
15	11	" 39	33	" -	Hernia - - -	3 Dec. -	"	15 Dec. -

- - - - - during the Period of this Return.

State if Invalided from a Foreign Station, the Place, Date, &c., and Remarks.	REMARKS.
Not invalided - - -	
" - - -	Aneurism of arch of aorta, burst whilst running. Lived twelve hours. Severe vomiting, rice-water evacuations, cramps, collapse, and death.
" - - -	Drowned accidentally whilst bathing at barracks; went down suddenly; cramp?
" - - -	Much vomiting, hepatic tenderness. Death from coma on sixth day.
Not invalided before - - -	Syphilitic cachexia.
4th August 1868, Rattle-snake, Cape of Good Hope.	Femoral hernia of left side from injury by the service; also hæmoptysis and phthisis.
Not invalided before - - -	
" " - - -	Total deafness of left ear and considerable deafness of right ear. Said to have been caused by broadside firing.
" " - - -	Varicose ulcer of right leg; constitutional.
" " - - -	Injury received in and by service at head quarters, 25th January 1869. Oblique inguinal hernia.
" " - - -	Disease of phalangeal bones of right great toe, resulting from a bunion.
" " - - -	Had three well marked "fits" in two days. No previous history of the disease.
30th November 1867, Caledonia, Mediterranean Station.	A very chronic case, long under treatment in Haslar Hospital.
21st December 1868, Ocean, China.	
Never invalided before - - -	Had no return of "fits" at head quarters.
" " - - -	Lameness of left arm following dislocation of clavicle. Injury received by a fall down stairs in barracks, 22nd January 1869.
22nd December 1868, Challenger, New Zealand	Oblique inguinal hernia, occasioned by service at head quarters, 11th May 1869.
Never invalided before - - -	Wound of back received in action, 29th July 1868. Is unable to stand erect.
" " - - -	Partial paralysis of left side, affecting organs of speech, arm, and leg.
8th April 1869, Eclipse, North America and West Indies.	Cataract of right eye.
Never invalided before - - -	General paralysis following concussion of the brain.
" " - - -	Defective vision following ophthalmia.
" " - - -	Lameness, following fracture of right thigh occasioned by the service. Fell from a scaffolding at barracks.
" " - - -	
1st February 1869, H. M. S. Peterel, Cape of Good Hope.	Found to be suffering from organic disease of heart when examined for embarkation.
12th June 1868, Argus, Cape of Good Hope.	Invalided home for secondary syphilis and cachexia.
Never invalided before - - -	Invalided home for loss of memory and neuralgia.
" " - - -	Defective vision of both eyes.
" " - - -	Has suffered from loss of voice for fourteen months. Chloroform and galvanism tried without success.
" " - - -	Otitis of both sides in a syphilitic constitution.
" " - - -	Chronic bronchitis with frequent attacks of spasmodic asthma.
" " - - -	Double inguinal hernia, said to be congenital.
" " - - -	Necrosis of clavicle, with permanent enlargement of the bone, causing lameness of right arm.
" " - - -	Oblique inguinal hernia. Injured by service on board Topaze, in the Pacific, 24th July 1867.
" " - - -	Oblique inguinal hernia. Injured by service in Pallas, Mediterranean Station, 19th April 1869.
" " - - -	Varicocoele of left side.
5th May 1869, Spiteful, East India Station.	Was a supernumerary in H. M. S. Spiteful. Persistent and irremediable sea-sickness.
4th October 1869, Northumberland, Channel Squadron.	Oblique inguinal hernia, discovered when a patient with syphilis.
Never invalided before - - -	
" " - - -	A large cicatrix on left leg, said to have been caused by an injury received in Achilles, 1st February 1867.
" " - - -	Fracture of both bones of right leg and resulting lameness. Not received on duty.
" " - - -	Oblique inguinal hernia of left side discovered; no assignable cause.

CLASSIFICATION of DISEASES for 1869.

Class and Nature of Disease.						Number of Cases.	Number per 1,000 Men.
Class	I. General Diseases, Section A.	-	-	-	-	19	12.2
"	II. " " B.	-	-	-	-	334	215.0
"	III. Diseases of the Nervous System	-	-	-	-	78	47.0
"	IV. " Circulatory	"	-	-	-	80	51.5
"	V. & VI. " Absorbent	"	-	-	-	11	7.0
"	VII. " Respiratory	"	-	-	-	197	126.7
"	VIII. " Digestive	"	-	-	-	305	196.2
"	IX. & X. " Urinary, &c.	"	-	-	-	260	167.3
"	XI. " Locomotive	"	-	-	-	15	9.6
"	XII. & XIII. Diseases of the Cellular System, &c.	-	-	-	-	268	174.4
Unclassed	-	-	-	-	-	16	10.3
Wounds and Injuries	-	-	-	-	-	229	144.6
TOTAL						1,807	1162.8

Mean Daily Force - - - 1,554.

TABLE showing Number of Men Borne, Entered, Discharged, &c. during this Period.

Average daily number of all ranks	-	-	-	-	-	-	1,554
Number of men embarked during the year	-	-	-	-	-	-	605
" disembarked	"	-	-	-	-	-	417
" discharged (for all reasons)	-	-	-	-	-	-	264
" entered as recruits or volunteers	-	-	-	-	-	-	25
" who are married	-	-	-	-	-	-	762

REPORT ON THE HEALTH

OF THE

ARTILLERY DIVISION OF ROYAL MARINES,

For the Year 1869.

By Staff Surgeon J. JENKINS, M.D., C.B.

In this annual Return from the corps it may not be inopportune to glance generally at its medical history, past and present; the relations which it may bear, in a medical point of view, to the army and navy; and also to inquire into any special injuries or diseases to which it may be liable as a separate body. Introductory.

For this purpose, the medical returns of previous years have been carefully gone over, several statistical tables compiled, and the hygienic condition of the barracks and neighbourhood inquired into, with a view to determine in what degree it may have favoured or prejudiced health. But in estimating the health-rate of the division, or in comparing it with the army and navy, the constant change in its *personnel*, owing to the departure of healthy men for embarkation, and the return of men from all parts of the world, who have disembarked, some with broken-down constitutions, and others with health impaired or enfeebled, the result of either climate or disease, or both combined, must not be forgotten.

During the year, 605 men, all in good health, left head-quarters for service at sea; and 417 disembarked. To the latter, furlough (for periods varying according to the length of their absence from England) is usually granted; and, that their holiday is not always spent in the most rational manner, we have the strongest proof in the many dyspeptic, nervous, and other complaints which appear on the sick-list after it is over and work commences. This casual, but frequently recurring, increase to the sick-rate must not be lost sight of, and its true cause recognised. It is, therefore, to be premised that, in the investigation of the origin and history of disease, a great difficulty exists in a corps such as this: Number of men embarked and disembarked.

Firstly.—In tracing the cause of disease, as much of it is contracted abroad, and no “medical history sheet” has hitherto existed in the corps.

Secondly, a large proportion of cases are sent to the Royal Naval Hospital at Haslar, where men may either die or be invalided, without further particulars being available for a Return like the present. Difficulty of obtaining accurate statistics.

In the early part of 1865 the Royal Marine Artillery corps (previously quartered at Fort Cumberland, Forton Barracks, and Portsmouth) was removed into the new, spacious, and magnificent barracks at Eastney, about two and a half miles east of Portsmouth. The men's quarters consist of two long blocks of brick buildings, three storeys in height, and built parallel to each other, at the respective distances of five and seven hundred yards from the sea on a gravelly soil. These blocks extend in a direction nearly east and west, and have their frontage and main entrances looking southwards or seaward. Location of corps.

The Southern Block is occupied by unmarried men, and contains the barrack-rooms proper, these being thirty-six in number, and having accommodation for 1,000 men; rarely more, however, than one-half the number of these rooms is occupied. Barrack-rooms.

Each room contains an average of twenty-eight men, and is of the following dimensions:

Length, 55 feet; width, 21 feet; height, 13 feet; giving to each man 536½ Cubic space.
cubic feet of air. ($55 \times 21 \times 13 = 15,015 \div 28 = 536$).

384.

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Appendix.	
Superficial space.	The number of superficial feet or flooring space per man is $41\frac{1}{2}$ square feet thus : $(55 \times 21) = 1155 \div 28 = 41\frac{1}{2}$. The quantity of air is somewhat under that allowed by army regulation, which is 600 cubic feet. The bedding and furniture, together with the bodies of the men, have also to be subtracted, which, allowing ten cubic feet for the former and four for the latter, leaves for each man, when the room is fully occupied, $522\frac{1}{2}$ cubic feet of air. In comparison with other well-conditioned and healthy dwellings, this appears to be ample where such a sufficient means of ventilation exists as is now employed in all permanent barracks.
Windows.	On each side of the rooms there are four windows, measuring in total breadth (on each side) sixteen feet, or rather more than one-fourth of the wall space.
Fireplaces.	The fireplaces are large and open, two in number in each room, and placed at nearly opposite angles.
Married quarters.	The Northern Block of building is principally occupied by married men and their families, and for this purpose it is divided into numerous small rooms, the average dimensions of which are $16 \times 16 \times 13$ feet, containing 3,228 cubic feet of air, but from this must be subtracted a sometimes large, but greatly varying amount for furniture and the bodies of occupants. These latter range from two to six in number, but in the case of children over five years of age large and roomy dormitories are provided on the upper floor of the building. The average number of occupants in the small rooms is under four, and, even with a considerable deduction being made for furniture, they cannot be considered as over crowded.
Dormitories for children.	
Ventilation.	The ventilation of the barrack rooms is carried on by means of three wooden shafts in each room, of quadrilateral form, about a square foot in size at the ends, and which extend at equal intervals across the ceiling. These shafts open directly into the external air by means of intervals in the brickwork, and communicate with the air in the rooms by numerous circular openings about one inch in diameter (about 100 of these perforations exist in each shaft).
Waterclosets, &c.	Waterclosets, urinals, and lavatories are attached to each room and situated on the stair landing; all have an abundant supply of good water, and are fitted with patent taps and valvular apparatus. The basins and pans are constructed of enamelled metal. They are however seldom used, and the waterclosets never (except in cases of emergency). The latrines, urinals, &c. in constant use are situated under a large glass-covered shed (used for drill) immediately behind the building, and communicate directly with a well-trapped drain running direct to the sea. An abundant supply of water keeps up a continual "flushing" of the urinals, &c.
Cleanliness.	Cleanliness of the rooms is maintained by thoroughly scrubbing the floors twice a week. The stairs and passages are cleaned daily. All the rooms, &c. are whitewashed annually.
Men not living in barracks.	Besides the men who live in barracks, a large number of married men live in the small houses which exist in the villages of Eastney and Mitton, their dwellings varying in distance from the barracks from fifty yards to one mile, and it is "a consummation devoutly to be wished" that the same sanitary laws which regulate a barrack-room could be extended to them. A few may be models of cleanliness, neatness, and order, but too many are the abodes of wretchedness, filth, and concomitant disease, and the description of them given by Assistant Surgeon Robertson, in last year's "Health of the Navy" still, unfortunately, remains true.
Surrounding district a source of infection.	
Zymotic disease.	Enteric fever is rarely absent from these dwellings, and such diseases as measles and scarlet fever, when once introduced, find a locality but too congenial to their further propagation. Facts are not wanting to prove that married men living out of barracks frequently import these diseases within their walls, and that they do so in a less degree than might even be expected, is no doubt due to the circumstances that they are less at home than their wives and families, that they are

are not so obnoxious to zymotic disease as children ; and, in the case of enteric fever, it is just probable, as has been suggested, that they owe their comparative immunity from it to drinking beer instead of water.

During Michaelmas quarter an epidemic of scarlet fever, and during Christmas quarter one of measles, prevailed (of the latter disease no fewer than sixty-nine cases occurred amongst women and children), yet only one married man contracted either disease ; and of the cases of enteric fever (noted in this year's return as the last of an epidemic of the previous year) only one of the men attacked lived out of barracks.

In studying the hygienic conditions surrounding individuals, the circumstances influencing health may be divided into two classes.

Appendix.

Hygienic conditions which influence health.

(1.) The essential and natural conditions of life common to all men ; as diet, air, water, soil, &c.

(2.) Conditions peculiar to men following particular employments, or forming special social bodies, such as soldiers, seamen, &c.

Under the first heading, I have briefly shown that the body with which we are concerned (whilst on shore) has an ample supply of fresh air, is well lodged, provided with all the necessaries, and not a few of the luxuries of life, and is generally speaking in a most favourable sanitary condition. The diet is that common to all British troops at home, and the means of recreation afforded the men is not, I believe, excelled either at home or abroad.

There remain, however, certain circumstances which tend to increase the returns under the various classes of disease, and which depend upon causes spoken of under the second head, or those which, *par excellence*, operate upon the men as soldiers in contradistinction to men employed in civil life.

Peculiarities in diseases of marines in their capacity of soldiers.

But, before enumerating those special causes of disease, it may be well to note that no true comparison can be drawn between the prevalence of disease in the army and that amongst civilians, except it may be in those cases which have a fatal termination. For, from the very nature of the soldier's duties, a much higher standard of health is required of him than of any other class, nor can he be indisposed for a single day without figuring on the health returns. It is, indeed, probable, that of the cases in the present return, three-fourths at least would never have appeared in any return of diseases in civil life, and of the thirty-five cases* invalidated, a very large proportion are still able to follow some other occupation. The facility, too, with which men can command medical attendance, no doubt increases the returns, as in minor cases of catarrh, diarrhoea, &c., many men would probably continue at duty in preference to walking a mile to see the "doctor." The temptation to escape some disagreeable duty, or some awarded punishment, is likewise a fertile source of exaggerated ailments.

A high standard of health required as compared with other occupations.

By referring to the nosological table, it will be observed that the diseases showing the greatest number of admissions and loss to the service by death or invaliding are classed under wounds, &c., diseases of the circulatory system, and diseases of the enthetic class.

These may be considered under the following headings, presuming that each acts as a principal cause in producing the above diseases respectively.

(1.) Labour.

(2.) Dress.

(3.) Prostitution.

Labour.—The amount of work performed by the Royal Marine Artillery Corps is considerably greater than by infantry regiments, and probably more than that by either the Cavalry or Royal Artillery. The drill comprises that of light infantry, field artillery, and naval guns, which latter is now of a particularly heavy nature, owing to the greatly increased size of the ordnance used in the "service

Duties of the corps.

* Including those invalidated from Haslar, 126 men were invalidated from the corps during the year. (See Table III.)

Appendix.

"service afloat." Modern guns, however, are becoming somewhat more manageable in working, from the greater amount of mechanical appliances (toothed wheels, levers, &c.) used in moving them at drill, and thus reducing the use of the "handspike," a frequent source of "rupture" among seamen and marines.

Drill.

About four hundred men are employed at drill daily for about five hours, the summer routine beginning at 6.30 a.m., and the winter routine at 8.30 a.m. For fifteen or eighteen months after joining the corps, a recruit has daily to undergo this "drudgery" of his profession, when, if found sufficiently trained, he is "passed" and drafted for service on board ship. A large number of men in the corps have, however, some other employment besides that of a soldier. Almost every trade is represented, and where practicable a man is "employed." Tailors, carpenters, plumbers, bricklayers, masons, &c., are all represented, as well as the lighter occupations of clerk, printer, &c. Well conducted men find occupations as officers' servants, coachmen, grooms, and occasionally nurses. It will thus be seen that, probably more so than in any other body of fighting men, does the civil element of labour prevail, and whether adding to health, or increasing disease, this must undoubtedly modify those diseases which may be peculiar to, or excessive in, more purely military bodies as regards occupation.

Injuries received on duty.

Under Labour may be classed all those diseases to which it may give rise either from the peculiarity of its nature or excess in its amount, and with the former may be classed all those injuries (many of minor surgical importance) received at gun drill, which show a large number of admissions and a considerable loss to the daily strength of the corps, and it will be seen by looking to the comparative table for the last four years that the numbers fluctuate very largely, depending greatly upon the number of *recruits* at daily drill, as these represent by far the most numerous of this class of cases.

The casualties of most frequent occurrence are contusions and lacerations of the fingers by being jammed in blocks, and of the feet and toes by being crushed under gun trucks. Three men were invalided during the year for injuries received on duty, one for lameness resulting from fracture of the femur caused by falling from a scaffolding at Eastney, and two for oblique inguinal hernia occasioned at gun drill; three other cases of hernia occurred at headquarters during the year, probably received on duty, but they could not be so distinctly traced to their origin.

Exposure to severe weather avoided.

Whilst at drill the men are rarely and never avoidably exposed to inclement weather. All field-battery drill is subject to a "general order" of weather permitting. Infantry drill is performed in a commodious glass shed, and naval guns are worked in large wooden batteries built to represent the gun-decks of a ship. The only unavoidable exposure to inclement weather is that undergone on sentry duty, each man keeping two hours' watch at a time, and eight hours' watch in twenty-four. Men employed on guard duty are out of bed, on an average, one night in five.

During severe weather sentries are relieved every hour. This duty doubtless gives rise to numerous cases of catarrh, and in winter to more severe affections of the respiratory organs. The guard-rooms are generally kept at a high temperature, and the alternation of heat and cold, with frequent lying down in wet clothes must be prejudicial in a high degree.

Marching, &c.

Besides drill and guard-keeping, general parades, marching out, and "field days" entail occasional heavy work upon the men. It has been calculated that a fully equipped soldier who marches ten miles, performs as much work as is usually done by a day labourer in ten hours, and as the former, in this case, does his work in about three hours, it will appear of no light character, nor do I think that such periods of great exertion, short as they are, are at all counter-balanced in their detrimental tendencies by the long hours of inactivity and indolence, which usually follow. It is, however, under the next head that I would briefly refer to diseases entailed by these duties.

Much disease is produced by dress, &c.

Dress.—That the dress of the soldier is a fruitful source of disease there can be little doubt, and is, I believe, but a too plainly demonstrable truth; and much

much interest, amounting almost to "agitation," has been aroused on this subject, seeing that it is amenable to the first principle of cure, viz., to remove the cause. This is, however, but very indirectly under the control of the medical department.

That much good has been done of late years in this direction is undoubted, and I need but cite one instance in support of my statement, viz., the change in the construction of the "stock," a frequent cause of disease of the cervical and submaxillary glands, and, in scrofulous subjects, giving rise to chronic abscesses of intractable nature, not only causing much permanent loss to the service by invaliding, but producing most unsightly, painful, and troublesome disease, now happily of the rarest occurrence.

It has been acknowledged by the most competent authorities that the equipment of the soldier in times of peace neither fits him to endure greater fatigue in times of war, nor is the burden which he now carries any fitting preparation for the duties which he has then to perform, and those who have seen a party of marines sent on shore to "burn and destroy" the village of some saucy Chinese mandarin or the barracoon of some slave dealer on the coast of Africa, will see but little preparation for such a duty in the matter of dress.

"When war comes with its rude touch," says Dr. Parkes, "everything which is not useful disappears; what can be easiest borne is soon found out. The arts of the tailor and the orders of the martinet are alike disregarded, and men instinctively return to what is most simple and useful," and those of this corps who have seen active service can abundantly testify its truth.

The dress of the Royal Marine Artillery is similar to that of the Royal Artillery, and somewhat heavier than in the infantry. The following table shows the weights carried on the march:

Appendix.

Dress of the corps.

	<i>Lbs.</i>	<i>oz.</i>	Weights carried by men on parade or march, &c.
Personal clothing on body - - - - -	11	0	
Knapsack, containing spare kit, and greatcoat with straps	19	8	
Forage cap and canteen (carried on knapsack) - - -	2	0	
Haversack (carried in knapsack when not in use) - - -	0	8	
Rifle (Snider) - - - - -	8	15	
Sword bayonet and scabbard - - - - -	2	8	
Ball and cartridge pouches, belt, frog, &c. - - -	3	15	
TOTAL - - - - -	48	1	

With the above, a blanket (four pounds), water, and three days' provisions (eight pounds), would be carried on a long march in active service, making in all 60 pounds, without allowing for ammunition, which might vary in weight from one to six pounds.

Granting the necessity for carrying this weight, perhaps less may be said of the dress than of the manner in which it is worn. Everything, in the first place, is tight, tight in the extreme; the collar is tight round the neck, the tunic is buttoned tightly across the chest, the trousers are tight round the waist and they are tight in the perineum and vicinity of the scrotum. In addition to this pressure, acting unequally on the superficial venous circulation and compressing the pectoralis, latissimus dorsi, and other muscles of respiration, are the knapsack straps passing under the armpits, and again compressing the free edge of the pectoral muscle and the deltoid, two of the most powerful in moving the arm.

Tightness in dress, belts, &c.

It is not then surprising that we find not only diseases of the heart, both functional and organic, but also an excess of other diseases of the circulatory system,

Diseases of circulatory system.

Note.—As the corps of Royal Marines was raised in some degree to form a connecting link between the soldier and sailor, he may at least have some claim to the free and easy dress held so essential for the latter.

Appendix.

system, such as aneurism, varicose veins, varicocele and hæmorrhoids, which may doubtless, in large proportion, be attributed to compression by clothing either in a direct or indirect manner.

During the year, seventy-seven cases of heart disease or aneurism were under treatment ; of these, forty were sent to hospital ; one was invalided, and one died ; but on tracing the hospital cases we find that no fewer than thirty-seven were invalided, making a total loss to the service, from these diseases alone, of thirty-eight men or 22·45 per 1,000 of mean force. It will be seen, on reference to Table III., that nearly one-third of all cases invalided from the service suffered from disease of the heart. Of a total of eleven cases of death occurring in the year (including those in Haalar), one-third arose from the same cause, showing a ratio of 2·57 per 1,000 of force.

Greatest permanent loss of service arises from cardiac disease.

Mechanical origin of this disease.

Epilepsy.

It will thus be seen that diseases of the heart occupy the most prominent position of those which give rise to permanent loss of service either from death or invaliding, and considering that a man enters the service in the prime of life and, presumably, unaffected by disease of any kind, we are, in the absence of other special cause connected with his profession as a soldier, driven by a process of exclusion to place the vast excess of his mortality and invaliding from heart disease to the influence of his dress. That many of these cases have a mechanical origin is, I think, easily demonstrated. The tight-fitting trousers which, during the breakfast or dinner meal, have been unbuttoned at the waist, can only be re-buttoned by forcibly compressing the abdomen and pushing the stomach and diaphragm upwards into the cavity of the thorax, whilst the tight-fitting tunic, with its powerful ally, the belt, unites to resist the invasion by preventing the thorax from expanding upwards or laterally. The consequences are, the lungs are compressed and circulation through them impeded, the heart becomes sur-charged and labours to clear itself, as its tumultuous and irregular action testifies, and the pain, palpitation, dyspnoea, vertigo, and fainting which ensue afterwards. That it is also a cause of epilepsy is not improbable, from the fact that the first seizure, in the cases which have come under notice, has generally taken place when the man was on parade or fully accoutred.

In an endeavour to classify cardiac affections, it would be difficult to distinguish between cases of an organic nature and those of palpitation only, owing, not only to difficulty of accurate diagnosis, but also to the fact that a large number are invalided from hospital ; but, in treating of loss of service from this cause in a medico-military point of view, the clinical aspect of the cases may be thrown aside, as the patient is equally unfitted for service, whether he may suffer from organic lesion or persistent violence of action.

“Irritable heart.”

In cases of “irritable heart,” where palpitation is excessive on slight exertion, a few days’ rest in bed, a purgative, and perhaps a few doses of digitalis, are usually found to ally all urgent symptoms ; the patient then expresses himself as “well,” and is, so to speak, discharged cured ; but again and again does his name appear on the records of the infirmary to be as often re-fitted for work, till, after a useless expense to the country and a long score of sickness, he is finally invalided and lost sight of ; and this latter fact ought to be borne in mind in all statistics of heart disease, comparing its frequency in civil and military communities, as discharged soldiers belong to the former.

Prophylactic measures.

It is, I fear, to prophylactic measures alone that we can look for any diminution in this class of disease. A higher standard of physique, a less severe and more graduated training of the young recruit, and, above all, a total change in the style of dress, are amongst the chief desiderata. Efforts already made have not been without fruit, the old rigid strangulating stock has disappeared, the cumbersome knapsack has given way to one at least less so, and men in this corps,

Note.—It may be a subject worthy of inquiry, how much the numerous cases of jaundice owe their origin to compression of the liver by the tunic and waistbelt.

During the year eleven cases occurred, two of which proved fatal. This is a number equivalent to that in the home “service afloat” for previous three years.

corps, and I believe in others, are allowed to wear a light serge or duck jacket, whilst at gun drill and fatigue duty, instead of the luttoned-up "shell." But yet much remains to be done before the soldier can be freed from those trammels which so literally bind him, and before he can, like other hardworking men, be said to "strip to his work."

Appendix.

At the date of this return the new valise is under trial here, as in various Line regiments, and appears to be a step in the right direction. It removes much of the compression from the deltoid and pectoral muscles, and placing, as it does, the principal portion of the weight on the upper part of the sacrum, throws it below the man's centre of gravity, thus adding to his stability, and obviating the necessity of the forward stoop necessary to counterbalance the knapsack. The men seem to approve of it (no mean test of the comparative ease with which it is carried), although it is said to possess the disadvantage of keeping the loins too warm.

The new "valise."

In Table IV. a summary of cases of heart diseases which were invalided is given. It is worthy of note that although men enter the corps at eighteen years of age, and many buglers and drummers still younger, no case has been invalided under the age of twenty, showing that the disease is not very rapidly developed.

So far as can be ascertained from the hospital records, five only of the thirty-six cases of cardiac disease were of an organic nature, and on subtracting them from the whole, we find an average of $4\frac{2}{3}$ years as the period of service of men invalided for palpitation alone.

Prostitution.—With this heading as a cause, may be included all those diseases arising from impure sexual intercourse; from a simple abrasion of the mucous membrane of the penis to constitutional syphilis in the most severe degree. As a source of disease, it may now be considered as amongst those having some peculiarity in its operation among naval and military bodies, since the "Contagious Diseases Act" was made specially applicable to garrison and seaport towns.

In Table V. a comparison is shown between army, navy, and marine artillery, and although the cases shown as occurring in the latter body appear in great excess, it must be borne in mind: (1.) That it is permanently stationed in a town surpassed by none in Europe in the flagrancy of its prostitution; (2.) That the mean strength of the corps (1,554) has been represented by upwards of 2,000 individuals; and, (3.) That secondary syphilis is imported from all parts of the world.

Syphilis and gonorrhoea in army, navy, and marine corps.

In comparison with the "service afloat," it may be remarked that as a man has no opportunity of propagating his disease at sea he is not unfrequently allowed to continue at duty whilst under treatment for a simple sore or mild gonorrhoea, and is consequently not shown in the returns of sickness. Almost without exception have the men in this corps been placed on the sick-list or under treatment in the infirmary for the most trivial "contagious disease," and as these cases may show in what degree legislation has modified the disease, it may be useful to note the changes which have occurred during its working.

Effects of the Contagious Diseases Act.

Gonorrhoea has not diminished. The number of cases has averaged 141 per 1,000 of mean force yearly since 1866, and has not shown any marked diminution or increase in any one year. The disease is generally of a subacute character; cases complicated with chordee or severe ardor urinæ are not frequent; bubo an exceedingly rare complication, and orchitis occurs comparatively seldom. These latter complications doubtless owe their rarity to the detection of the disease in its early stage, and the immediate enjoinder of rest.

Syphilis (Primary), in which we include every primary venereal sore, has undergone a marked diminution in frequency since the Act came in force.

In 1866, 184 cases per 1,000 were admitted, whilst during 1869 only 102 per 1,000 were admitted, or but little over one-half of the former year. That the diminution has been gradual and without other apparent cause leads us to the conclusion

Appendix.

conclusion that, on this score at least, the Act has not been without a striking effect. Buboës rarely follow the primary sores admitted to the infirmary, owing, no doubt (as in the case of gonorrhœa), to the early stage in which rest is given, and contrasted with the large suppurating buboës one has seen so frequently on board ship, arising from blue-jackets continuing at their duty aloft long after the sore has declared itself, we certainly reap an advantage, not only in having a body of men who, I think, less frequently conceal their disease, but also an infirmary close at hand.

The great majority of these venereal cases consist of but little more than small ulcers of the mucous membrane secreting purulent matter; occasionally the mucous membrane of the glans or inner surface of the prepuce is merely abraded, constituting mild balanitis.

The sore described as the "parchment-like" sore is not infrequent, not excavated nor possessing the pea-like hardness of the Hunterian chancre, but generally of greater extent; the base firm and as large as the surface, of a redder and more healthy appearance, and secreting less pus than the simple soft sore. This is the sore for which one so often hesitates to give mercury, and has, however, very frequently to do so before it will heal. It seems, indeed, to be a connecting link (and, like all connecting links, a debateable ground) between the non-infecting sore and the true Hunterian chancre. The latter class of sore occurs but rarely, and it is to be regretted that we have no records by which we can ascertain its previous history. I think, however, I am correct in saying that it has diminished of late years; and this is a most important point. If sores are really divided into those which infect and those which do not infect the system, then it would be no small gain to have succeeded in diminishing the numbers of the former, should the total numbers remain even as before. (As I shall show, our statistics of secondary syphilis are but of small value on this point.)

No cases of phagedenic sore are reported for the year.

On the influence of the "Act" over secondary syphilis, I am unable to speak with that accuracy which is alone valuable. During four years since 1866, the highest return is shown in the present year, and the lowest return in the preceding year. Having here in every sense a "floating" population, it is difficult to determine how much of the constitutional disease may result from contagion contracted abroad. A large ship paying off at a home port, or a troopship arriving from China or other stations, never fails to produce several broken-down subjects who have run a prolonged course of suffering, and who, perhaps, are unable to say either where or when they received the first seeds of the disease which wrought their woe.

Medical officers of the army and navy are, I believe, all but unanimous in their approbation of the "Contagious Diseases Act," but probably their opinions of it are based no less upon what they expect from it for the future than what they have seen of its operation in the past. That its deficiencies are great we have irrefragable evidence in the fact that, of 1,000 men (*i.e.*, not including married men on shore), no fewer than 383 admissions took place from gonorrhœa and primary syphilis alone, and of these cases only about six per cent. contracted the disease elsewhere than Portsmouth or its vicinity.

If not to be recognised as an industrial occupation, prostitution is no less amenable to some general laws of political economy, and requires for its governance certain principles which we are in the habit of applying to various forms of labour. The market being large enough (at least in Portsmouth), there is an ample supply for the demand, and if by shutting up several sources of supply we think to diminish the evil, we throw but a greater demand on the women remaining, and, as to disease, only cause it to assume a more concentrated form and to exercise an influence of wider cast.

To be successful, the suppression of disease must be complete; a partial suppression can never be satisfactory; the fortnightly examinations of prostitutes, and their occasional identification at other times by men who are diseased, are means wholly inadequate to the ends which we purpose to attain.

Gonorrhœa is the form of disease apparently least influenced by the operation of the law, and this appears equally to apply to the army and home "service afloat." This, I believe, is easily accounted for when we consider the difficulty of detecting gonorrhœa in women, a difficulty recognised by every experienced syphilographer,

syphilographer, and one regarding which such an authority as Acton does not hesitate to give most precise directions. The women have not only ample opportunity of cleansing themselves before being inspected, but gonorrhœa does not in them produce such marked symptoms as it does in man, and so may the more easily be overlooked. And again, the greatest care and patience is required to ascertain that they are thoroughly cured before being discharged, as unless they are so, the disease is most apt to recur among subjects who lead such lives as the low women of Portsmouth.

Appendix.

GENERAL REMARKS.

During the year 1869 no fewer than 1,760 cases of disease or injury were placed under treatment (exceeding in number the daily mean force employed by somewhat over one-seventh part).

Of these, 345 were discharged to the Royal Naval Hospital at Haslar, thirty-five were invalided, four died, forty-one remained in the infirmary at the close of the year, whilst the remaining 1,382 were discharged to duty.

Two cases of measles and one of scarlet fever occurred during the year, all being mild in character. The former case doubtless arose from the existence of the disease amongst the children, and the latter had its origin traced to a brothel in Portsmouth.

General diseases.
Section A.

During the latter part of 1868 an epidemic of typhoid fever prevailed in the neighbourhood of the barracks, principally confined to the women and children, but also, unfortunately, attacking the men, thirteen of whom suffered from the disease during the last four months of the year.

Of the cases noted in this return, one remained from the previous year and another was added in the first quarter. The third case occurred in the month of June, and was of severe character, but without any history giving a clue to its origin. All these cases were sent to hospital.

Two cases of cholera occurred, one of which proved fatal; the other was treated in the patient's own house during the most severe stage, but sufficient data are not procurable to warrant it being classed as a case of the true Asiatic type. The man had been subject to frequent attacks of cramp, diarrhœa, and vomiting; and although great prostration of the vital powers, in this instance, accompanied these symptoms, he rapidly recovered, and went to duty in a few days after admission.

Ninety-nine cases of rheumatism were under treatment during the year; of these, twenty-four were sent to hospital, one was invalided, three remained under treatment, and the remaining seventy-one were discharged cured. Few of these were of acute character, and many no doubt of syphilitic origin.

General diseases.
Section B.

The great increase of admissions from this disease during the first and last quarters of the year, compared with the intervening six months, shows how much the temperature and other meteorological changes influence this disease.

Primary Syphilis.—One hundred and sixty-two cases of primary venereal disease occurred during the year, or 104·27 per 1,000 of mean force. This compares favourably with the preceding year, and shows a diminution of no less than eighty cases per 1,000 of the force since 1866, in which year the "Contagious Diseases Act" commenced its operation in Portsmouth.

The large majority of cases admitted under this head consisted of the primary non-infecting sore (many of them trifling in character), usually healing under local applications only, and very rarely followed by bubo.

Secondary Syphilis.—Thirty-nine cases of constitutional syphilis were under treatment during the year; of these, eighteen were sent to hospital, one was invalided, five remained under treatment, and fifteen were discharged cured. To these cases, however, may doubtless be added several returned as rheumatism,

Appendix.

ophthalmia, skin diseases, and (it may be) palpitation of heart, which, from ignorance of the patient's previous history, and also of the pathological effects of the venereal poison, cannot yet be indisputably traced to its working.

Class III.

Of diseases of the nervous system and organs of special sense, seventy-three cases were admitted during the year, or forty-seven per 1,000 of mean force.

One case of apoplexy occurred in a gunner, *æt.* 29, which resulted in paralysis of the right side, and for which he was invalided from Haslar in November. Five cases of paralysis are shown, but one case was entered twice, leaving four subjects of this disease. One case is said to have been occasioned by excessive drinking, and caused loss of motion, to a considerable degree, of the left arm and leg. He subsequently did well. Another case was said to have been occasioned by drinking, and also by receiving a blow on the head whilst serving in the West Indies. He was invalided abroad, and in his invaliding papers he is stated to be completely hemiplegic, but on his arrival here he was able to walk about with only slight dragging of the limbs. The remaining two cases were foreign invalids waiting final discharge, and no particulars are to be learnt concerning their previous history.

Class IV.

Diseases of the circulatory system are as usual the most prominent of those which give rise to permanent loss of service in the army (with which force, for purposes of comparison, this corps may be classed). Eighty cases occurred during the year, giving a mean ratio of 51.5 per 1,000; of these, one died (see Deaths), one was invalided, forty-three were sent to hospital, and thirty-five were discharged to duty. In tracing the cases of heart disease sent to hospital, it is found that of thirty-nine cases no fewer than thirty-five were invalided; twenty-nine for functional and six for organic disease.

Of four cases of aneurism, one died from rupture of the aorta; one suffered from aneurism of the *arteria inominata*, but was discharged from the service as an objectionable character; a third was sent to hospital with abdominal aneurism, from which place he was invalided; and the fourth—a most interesting case of idiopathic popliteal aneurism, noted in the quarterly return for Michaelmas quarter—was sent to hospital, where he was treated by a new graduated mode of pressure, returned to duty cured, and has now not the slightest remnant of the disease, nor does he show any signs of cardiac or arterial affection. (This case was reported in the "*Lancet*," see volume for 1869).

Class VII.

Of diseases of the respiratory organs, 197 cases were under treatment during the year, or 126.7 per 1,000 of mean force.

Of these, ten were discharged to hospital, two were invalided, three remained by last return, and the remaining 182 were discharged to duty. As usual, a large number of cases of catarrh occurred, requiring only two or three days for cure, and many of them were so slight as not to require admission into the infirmary.

Class VIII.

Diseases of the digestive system show 305 admissions, or 196.2 per 1,000 of mean force, the principal ailments under this heading being *cynanche* (sixty) and *diarrhoea* (sixty-one). Of the former, five cases were sent to hospital, and of the latter, all returned to duty after a short course of treatment.

Eight cases of *hernia* occurred during the year, and all were supplied with trusses and invalided. Two were injured on duty at headquarters, four on board ship (of which, two were previously invalided), and the remaining two were discovered upon examination for other purposes. One of the latter was said to be congenital.

Gonorrhoea was, as usual, the prevailing disease in this class, there being 226 cases, or 145.4 per 1,000 of mean daily force, which was slightly above the average for the three preceding years.

Phlegmon and ulcer were largely represented during the year, numbering together 202 cases of admission, or 130 per 1,000. Of these, nine were sent to hospital, two cases of ulcer were invalided, two remained under treatment, and 189 returned to duty.

Gonorrhoea

Of skin diseases (scabies excepted), thirty-one cases were admitted, and in the quarterly returns were classed as follows :

Appendix.
Classes IX. & X.

Class XII.

Nature of Disease.	Hospital	Duty.
Eczema - - - - -	-	5
Ecthyma - - - - -	1	6
Herpes - - - - -	2	5
Impetigo - - - - -	1	5
Leprosy - - - - -	-	1
Prurigo - - - - -	-	1
Psoriasis - - - - -	2	1
Sycosis - - - - -	1	-
Total - - - - -	31	

Thirty-three cases of scabies were under treatment during the year ; of which, thirty-one were cured and two remained under treatment.

Only one case of delirium tremens occurred during the year, and it is somewhat remarkable that for two previous years no case occurred in the corps. Unclassed.

Under this heading, however, may be noted the occurrence of thirty-two cases of dyspepsia à potu, all of which, however, did well, and did not pass that boundary line which, frequently by narrow limits, separates this from the former disease.

Two hundred and twenty-nine cases of wounds and injuries were under treatment during the year, or 144.6 per 1,000 of strength. Wounds and injuries.

Of these, four cases were invalidated, seven were sent to hospital, five remained under treatment, at the close of the year, and the remaining 213 were discharged cured.

The great majority were cases of minor surgical importance, principally produced at drill, and consisting of sprains of joints, jammed fingers and toes, &c.

Two cases of fracture were invalidated ; one was a case of fractured thigh, caused by a fall from a scaffolding whilst on duty ; and the other was a simple fracture of both bones of the leg, caused by slipping off the kerbstone whilst the patient was intoxicated.

The case of dislocation invalidated was that of the sternal end of the clavicle, caused by a fall down the barrack stairs.

The wound invalidated was a gunshot wound of the back, received in action in New Zealand, and for which the patient was invalidated home from Her Majesty's Ship "Challenger."

CASES resulting in DEATH.

During the year four cases of death occurred in the corps at head quarters, or 2.57 per 1,000 of mean force.

One was a case of accidental drowning. Another a case of jaundice, terminating fatally after a short illness.

Appendix.

A gunner was seized with symptoms closely resembling those of Asiatic cholera; he was much depressed when first seen, never rallied, and expired in 38 hours after admission into the infirmary.

A suddenly fatal case of aortic aneurism occurred in a gunner who had never previously complained of the disease. He fell down when running, and almost immediately after was picked up in a state of collapse, and expired the following day. The autopsy revealed an enormous extravasation of blood into the cavity of the chest, from the bursting of an aneurismal sac, the size of a small apple, at the arch of the aorta; the opening was about the size of a shilling. It is remarkable that this man lived so many hours subsequent to the occurrence of such a lesion.

These cases are fully detailed in the original report, but it does not seem necessary to give them here *in extenso*.

TABLE I.
DEATHS occurring in the Division on Shore during the Year 1869.

DISEASE.	Age.	Length of Service in Years.	Died at Head Quarters.	Died in Hospital.	Total.	Ratio per 1,000 of Force.	REMARKS, &c.
Aneurism -	40	19	1	-	1	0·64	Rupture of arch of aorta. No previous history.
Bronchitis -	40	18	-	1	1	0·64	Acute; complicated with pneumonia.
Cardiac Disease	39	21	-	1	1	-	Organic. Duration unknown. Syphilitic cachexia.
	26	8½	-	1	1	1·92	Attacked whilst at drill on field-day. Double bellows murmur. Phthisis.
	29	11	-	1	1	-	Systolic murmur; duration not known.
Cholera -	30	9	1	-	1	0·64	Death in sixteen hours.
Drowning -	26	4	At Eastney Barracks.		1	0·64	Accidentally drowned whilst bathing.
Hepatitis -	32	13	-	1	1	0·64	Enlargement of liver of long standing. Ascites.
Icterus -	32	8	1	-	1	1·28	Death from coma on sixth day.
Phthisis -	27	7½	-	1	1		Particulars not ascertained.
Phthisis -	35	18	-	1	1	0·64	Of long duration, with syphilitic cachexia.
TOTAL - - -					11	7·00	

TABLE II.
SHOWING Comparative Number of ADMISSIONS of PRINCIPAL DISEASES for Four preceding Years.

DISEASE.	Ratio per 1,000 of Mean Force.			
	1865.	1866.	1867.	1868.
Fever, Continued -	14·93	4·36	-	9·83
Small-pox -	7·49	-	-	-
Measles -	0·68	4·36	1·60	1·58
Scarlet Fever -	-	-	-	2·32
Epilepsy -	4·09	7·47	2·13	2·32
Phthisis -	3·40	1·87	5·35	16·94
Cardiac Disease -	13·62	14·94	9·11	27·18
Varicose Veins, Varicocele, and Hæmorrhoids -	14·30	8·72	8·58	5·20
Diarrhœa -	89·91	147·57	160·68	119·72
Hepatitis and Jaundice -	4·08	2·49	4·28	4·63
Syphilis, Primary -	250·68	184·20	163·40	159·5
Gonorrhœa -	83·10	136·50	152·20	133·1
Rheumatism -	117·09	95·89	72·31	68·25
Delirium Tremens -	3·40	6·23	1·60	1·16
Dyspepsia à Potu -	17·03	19·30	18·75	14·46
Wounds, &c. -	149·86	181·19	171·40	148·64
Hernia -	9·54	3·11	3·75	5·20

TABLE III.

DISEASES and AGES of all Men Invalided from the Corps during the Year.
(Land Service only.)

DISEASE.	15-20.	20-25.	25-30.	30-35.	35-40.	Head Quarters.	Hospital.	TOTAL.
Rheumatism - - -	-	2	2	1	1	1	5	6
Syphilitic ditto - - -	-	1	1	1	-	1	2	3
„ Cachexia - - -	-	2	1	1	-	-	4	4
Phthisis - - - -	5	9	6	2	-	1	21	32
Paralysis - - - -	1	-	2	1	1	2	3	5
Epilepsy - - - -	-	4	-	-	-	3	1	4
Neuralgia - - - -	-	-	1	1	-	1	1	2
Insanity - - - -	-	-	1	-	-	-	1	
Cerebral Disease - - -	-	-	-	-	1	-	1	1
Vertigo - - - -	-	-	1	-	-	-	1	1
Ophthalmia - - - -	-	5	-	2	1	3	5	7
Fistula, Lachrymal - - -	-	-	1	-	-	-	1	1
Disease of Ear - - -	-	-	1	2	-	2	1	3
„ Heart - - - -	-	13	17	3	3	1	35	36
Aneurism - - - -	-	-	1	1	-	-	2	2
Aphonia - - - -	-	1	-	-	-	1	-	1
Bronchitis. - - - -	-	1	1	-	-	-	2	2
Asthma - - - -	-	1	1	-	-	1	1	2
Hernia - - - -	-	2	5	1	-	8	-	8
Varicocele - - - -	-	2	-	-	-	1	1	2
Disease of Bones - - -	-	-	-	1	-	1	-	1
„ Joints - - - -	-	1	-	-	-	-	1	1
„ Bursæ - - - -	-	-	-	1	-	1	-	1
Ulcer - - - -	-	-	1	1	-	2	-	2
Lupus - - - -	-	-	-	1	-	-	1	1
Sea Sickness - - - -	-	1	-	-	-	1	-	1
Wounds - - - -	-	-	1	-	-	1	-	1
Fractures - - - -	-	-	1	2	-	2	1	3
Dislocation - - - -	-	-	1	-	-	1	-	1
TOTAL - - -	6	45	46	22	7	35	91	126

TABLE IV.

SHOWING the AGES and LENGTH of SERVICE of Men Invalided for Cardiac Disease during the Year.

Age - - -	20	22	23	24	25	26	27	28	30	31	32	Above 32	—
Number of Cases -	2	2	5	4	2	7	5	3	1	1	1	3	Total Cases, 36.
Combined Length of Service in Years - -	24 $\frac{1}{12}$	24 $\frac{1}{12}$	8	11	64 $\frac{1}{12}$	36	34	23	11	10	10	49	Total Service, 204.

By dividing the number of years' service by the number of cases invalided, we find an average service of 5 $\frac{4}{12}$ years. The average age is a little over 26 years.

TABLE V.

SHOWING Ratio per 1,000 of VENEREAL CASES occurring during the Years 1866, 1867 and 1868, and Comparison with Regular Troops, and "Service Afloat," on the HOME Station.

YEAR.	Primary Syphilis.			Secondary Syphilis.			Gonorrhoea.		
	Army.	Navy.	Royal Marine Artillery.	Army.	Navy.	Royal Marine Artillery.	Army.	Navy.	Royal Marine Artillery.
1866 -	68.2	53.4	184.2	21.1	15.9	30.9	83.7	20.4	136.5
1867 -	88.8	41.1	163.4	28.1	14.9	37.6	115.9	22.4	152.2
1868 -	81.8	37.1	159.5	31.6	15.7	21.9	117.0	20.4	133.1

MEDICAL AND SURGICAL REPORT
OF THE
ROYAL MARINES AT FORTON BARRACKS,
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
STAFF SURGEON FREDERICK HARVEY.

MEDICAL AND SURGICAL REPORT of the ROYAL MARINES at FORTON

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Morbili - - - -	-	3	-	3	-	-	-
	Scarlet Fever - - -	-	2	-	2	-	-	-
	Simple Continued Fever -	1	13	10	4	-	-	-
II. General Diseases, Section B.	Rheumatism - - -	-	59	33	24	-	-	2
	Gout - - - -	-	2	2	-	-	-	-
	Syphilis, Primary - - -	-	116	41	74	-	-	1
	" Secondary - - -	1	21	15	7	-	-	-
	Phthisis Pulmonalis -	-	11	-	10	-	1	-
III. Diseases of the Nervous System and Organs of the Special Senses.	Paralysis - - - -	-	2	-	2	-	-	-
	Epilepsy - - - -	-	1	-	1	-	-	-
	Neuralgia - - - -	-	2	1	-	-	-	1
	Cerebral Disease - - -	-	4	-	4	-	-	-
	Insanity - - - -	-	3	-	2	-	1	-
	Ophthalmia - - - -	-	23	18	5	-	-	-
	Defective Vision - - -	1	2	-	-	-	3	-
	Diseases of the Ear - -	-	5	3	1	-	1	-
IV. Diseases of the Circulatory System.	Disease of the Heart :							
	Functional - - -	1	13	6	8	-	-	-
	Organic - - - -	-	6	-	3	-	3	-
	Varicose Veins - - -	1	6	1	-	-	6	-
V. & VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - - -	-	14	4	10	-	-	-
VII. Diseases of the Respiratory System.	Diseases of the Larynx -	-	1	-	1	-	-	-
	Catarrh - - - -	4	129	119	11	-	-	3
	Bronchitis - - - -	-	17	3	13	-	-	1
	Pneumonia - - - -	-	6	-	6	-	-	-
	Hæmoptysis - - - -	-	3	1	2	-	-	-
VIII. Diseases of the Digestive System.	Cynanche - - - -	-	54	48	6	-	-	-
	Dyspepsia - - - -	3	93	83	12	-	-	1
	Diarrhoea - - - -	-	31	30	1	-	-	-
	Colic and Constipation -	-	12	11	1	-	-	-
	Hæmorrhoids - - - -	-	3	2	1	-	-	-
	Hernia - - - -	-	9	1	-	-	8	-
	Fistula - - - -	-	1	-	1	-	-	-
	Hepatitis - - - -	-	1	-	1	-	-	-
	Icterus - - - -	-	2	-	2	-	-	-

BARRACKS, between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from.										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
1	1	2	4	-	-	-	-	-	-	3	5
1	3	1	1	-	-	-	-	-	-	2	4
7	52	5	29	1	5	-	-	-	-	13	86
13	62	30	184	16	110	-	-	-	-	59	356
-	-	-	-	1	14	1	13	-	-	2	27
80	353	34	185	2	13	-	-	-	-	116	551
12	80	8	69	1	2	-	-	-	-	21	151
5	33	5	9	1	1	-	-	-	-	11	43
-	-	1	4	1	23	-	-	-	-	2	27
-	-	1	1	-	-	-	-	-	-	1	1
2	7	-	-	-	-	-	-	-	-	2	7
-	-	3	6	1	1	-	-	-	-	4	7
-	-	3	5	-	-	-	-	-	-	3	5
9	120	10	67	3	22	1	5	-	-	23	214
2	18	-	-	-	8	-	-	-	-	2	26
2	13	2	8	1	20	-	-	-	-	5	41
5	33	5	42	3	11	-	-	-	-	13	96
1	4	4	25	1	1	-	-	-	-	6	30
3	18	2	17	1	2	-	-	-	-	6	37
10	117	3	11	1	2	-	-	-	-	14	130
-	-	1	1	-	-	-	-	-	-	1	1
63	381	58	385	8	57	-	-	-	-	129	823
4	19	8	55	5	24	-	-	-	-	17	98
2	8	3	7	1	2	-	-	-	-	6	17
1	1	2	19	-	-	-	-	-	-	3	20
32	229	17	109	5	34	-	-	-	-	54	372
31	175	48	221	14	72	-	-	-	-	93	468
15	57	10	35	6	25	-	-	-	-	31	117
6	16	5	20	1	14	-	-	-	-	12	50
3	18	-	-	-	-	-	-	-	-	3	18
2	9	5	50	2	24	-	-	-	-	9	83
-	-	1	1	-	-	-	-	-	-	1	1
1	1	-	-	-	-	-	-	-	-	1	1
1	1	1	5	-	-	-	-	-	-	2	6

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MEDICAL and Surgical Report of the Royal Marines at Forton Barracks,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
IX. & X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	6	1	5	-	-	-
	Gonorrhœa - - -	2	126	104	17	-	-	7
	Stricture - - -	-	8	-	2	-	1	-
	Varicocele - - -	-	1	1	-	-	-	-
	Orchitis - - -	1	25	13	10	-	-	3
XI. Diseases of the Organs of Locomotion.	Diseases of the Bones -	-	2	-	1	-	1	-
	Diseases of the Joints -	-	1	-	-	-	1	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Tumour - - -	-	2	1	1	-	-	-
	Phlegmon and Abscess -	1	82	78	2	-	-	3
	Ulcer - - -	3	26	19	8	-	-	2
	Eczema - - -	-	10	5	3	-	-	2
	Lepra - - -	-	1	-	1	-	-	-
	Herpes - - -	-	4	3	1	-	-	-
	Scabies - - -	-	13	12	-	-	-	1
	Impetigo - - -	-	4	4	-	-	-	-
	Psoriasis - - -	-	1	1	-	-	-	-
Unclassed - - -	Debility - - -	-	7	6	1	-	-	-
	Delirium Tremens - -	-	1	-	1	-	-	-
Wounds and Injuries -	Wounds - - -	-	51	46	4	-	-	1
	Fractures - - -	-	7	3	3	-	1	-
	Sprains - - -	1	30	27	3	-	-	1
	Contusions - - -	-	73	66	5	-	-	2
	Burns and Scalds - -	-	2	1	1	-	-	-
	Congussio Cerebri - -	-	1	1	-	-	-	-
TOTALS - - -		20	1,149	823	288	-	27	31

between the 1st of January and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
1	1	1	2	4	18	-	-	-	-	6	21
91	1,135	33	369	2	15	-	-	-	-	126	1,519
2	9	1	4	-	-	-	-	-	-	3	13
-	-	1	3	-	-	-	-	-	-	1	3
15	111	7	107	3	29	-	-	-	-	25	247
-	-	2	9	-	-	-	-	-	-	2	9
-	-	1	9	-	-	-	-	-	-	1	9
-	-	2	16	-	-	-	-	-	-	2	16
48	286	33	288	1	4	-	-	-	-	82	578
9	125	14	94	3	16	-	-	-	-	26	235
5	64	4	63	1	1	-	-	-	-	10	128
-	-	1	1	-	-	-	-	-	-	1	1
1	7	3	19	-	-	-	-	-	-	4	26
10	63	3	21	-	-	-	-	-	-	13	84
4	79	-	-	-	-	-	-	-	-	4	79
1	8	-	-	-	-	-	-	-	-	1	3
3	17	4	39	-	-	-	-	-	-	7	56
-	-	1	1	-	-	-	-	-	-	1	1
24	196	23	260	4	39	-	-	-	-	51	497
1	1	5	91	1	1	-	-	-	-	7	93
16	112	11	89	2	18	1	33	-	-	30	252
42	241	24	142	6	50	1	16	-	-	73	449
2	7	-	-	-	-	-	-	-	-	2	7
-	-	1	4	-	-	-	-	-	-	1	4
589	4,298	453	3,206	103	678	4	67	-	-	1,149	8,239

Appendix.

REPORT ON THE HEALTH

OF THE

ROYAL MARINE LIGHT INFANTRY DIVISION,

PORTSMOUTH (FORTON BARRACKS),

For the Year 1869,

By Staff Surgeon FREDERICK HARVEY.

REMARKS.

FORTON Barracks consist of seven detached red-brick buildings, with an ample space between each ; four of these blocks are of much larger dimensions and differently constructed to the three others of more modern date, and are all connected in front by a one storey arcade or corridor ; the rooms contained in these buildings are the barrack-rooms of the men ; the cooking, ablution, bath-rooms, washhouses, storehouses, latrines, &c., are in the rear ; at the sides and in front are situated the officers' mess house and officers' quarters, &c., the whole enclosed by brick walls in an area of about five acres, the front facing the open country to the extent of half a mile or more, south, in the direction of Stokes Bay. The back wall on the banks of an arm of the sea (Forton Lake) extends from the harbour in the rear of the barracks, and terminates in a line with the wall forming the west boundary in conjunction with a road and numerous cottages on the west side of it, occupied in part by married men of the division, and by the civil populace ; an open space divides numerous cottages from the east wall, which is used for gardens, and is the property of the Admiralty, and within the jurisdiction of the commandant of this division. At low water the mud banks of the lake at the rear of the barracks become extensively exposed to the rays of solar heat ; and, in summer, with a northerly wind, the effluvia emanating from this foul surface are wafted through the atmosphere traversing the area of the barracks, and occasionally emit a sickly unpleasant odour. These blocks stand in a straight line from east to west, each containing two rooms on the ground floor, and two in each of the two upper storeys, well ventilated by means of large fire-places, numerous windows, and valves for the admission and exit of deteriorated atmosphere ; six lobbies are attached to the large and three to the smaller pavilions, for the use of the sergeants ; the regulation allowance of 600 cubic feet of air is afforded in each barrack-room.

The infirmary wards on the upper storey of one of the small pavilions consist of two ordinary barrack-rooms, which, when so occupied, afford accommodation for eighteen men each, with an allowance of 600 cubic feet of air per man ; but whilst appropriated for the use of the sick treated in barracks, who are not seriously affected and do not require any lengthened treatment, the allowance of 900 cubic feet is given to each patient by placing only twelve beds in each room ; no waterclosets existed in these barracks in 1869 ; the want of such accommodation was felt in the sick ward, and, on the representations made to the proper authorities, a sum was voted in the following year 1870-1, and convenient and commodious closets have been constructed in the lobby connecting the two wards, and are neither offensive nor unsightly, but a boon and comfort to the sick, and an effective adjunct to the house.

The latrines or privies are situated about 200 yards to the rear of the barracks, in close proximity to the lake, and open directly into it ; not being approachable by any covered way, men requiring to use them suddenly at night, in windy, wet or stormy weather, are exposed to sudden chills, &c., tending to the development of, or originating disease, which might be avoided by the construction of
closets

closets in each pavilion for night use. An experimental one has been built in one of the blocks, which answers well, and is in no way offensive or unsightly, and it is to be hoped that similar ones will be furnished to each block.

The sea flows into the latrines just mentioned, which are then comparatively inoffensive; but at low water, although they are reported trapped, they emit a very offensive smell, which might be wholly or partially remedied by more effectual trapping. The barracks appear to be well drained and trapped, the fall is not great; flushing is often resorted to in summer. The water supply is good and abundant, and on each occasion when it has been tested it was pronounced free from all deleterious substances.

The sanitary condition of the Portsmouth division of Marines serving at head quarters in Forton Barracks, Gosport, may be considered to have been satisfactory during the period embraced in this Report, viz., the year 1869.

The established strength of the division during that year was estimated at 3,423; of that number more than two-thirds were, during the same period, detached from head quarters on duty in ships on the Home and on all the Foreign Stations.

The daily average number of men and officers of all ranks serving at these head quarters, during the twelve months comprised in this Return, was 1,056; a portion of this number was employed in the different offices and departments in these barracks, as well as in the trades practised here, viz.: shoemakers, tailors, armourers, carpenters, blacksmiths, painters, and bricklayers, also in the band, who were all exempt from embarkation whilst so employed.

The number subject to embarkation during the year was gradually discharged from head quarters to ships newly commissioned, to relieve men at the expiration of their time in home ships and in hospitals, and to fill up vacancies on foreign stations caused by deaths or invalidings and a considerable number to act as ward-room servants.

The disembarkation of men was also of frequent occurrence by ships being put out of commission, by the discharge from ships and hospitals of time-expired men, by the return of foreign invalids, and by the disembarkation of ward-room officers' servants.

At times the supply at this division was not equal to the demand, and men were sent from the other divisions to meet it.

The number of men belonging to this division who disembarked during the year was 853, besides 118 belonging to other divisions; and 223 were sent here from other divisions for the purpose of embarkation. The daily average number of men belonging to other divisions at these quarters during the twelve months, was 23·6. The embarkations during the year amounted to 950.

The average service of each man on shore was eight or nine months in the year. In estimating the ratio of cases entered on the sick-list, the daily average number of men serving at head quarters is taken; but the invaliding and death-rates are calculated on the established strength of the division.

The total number of cases entered on the sick-list was 1,149, being 1088 per 1,000 of the force serving at head quarters.

The total number of persons invalided from this division was 100, which is in the ratio of 29·2 per 1,000 of the established strength.

The total number of deaths of men belonging to this division, at home and abroad during the twelve months was 27, which made the total death-rate 7·8 per 1,000 of the established strength.

Although the sick-rate was relatively higher than that of the whole force of the ships on the Home Station, yet the cases were for the most part of an unimportant character. One thousand one hundred and forty-nine were added to the sick-list during the twelve months, twenty admitted in the previous year, remaining in barracks, and thirty-one remaining in Haslar Hospital, making the total number of sick belonging to head quarters under treatment during the year equal to 1,200; the force serving at head quarters was 1,056, which is in the ratio of 1,136·4 per 1,000.

The average number of men sick daily in barracks and in hospital out of the number borne at head quarters was 56·5, which is in the ratio of 53·5 per 1,000.

Each case was, on an average, under treatment and in the infirmary in barracks, 17·1 days, and the total number of days' sickness divided amongst the daily average number of men in barracks, was 19·5 days' sickness to each man.

The disposal of the 1,200 cases in the year included 1,055 discharged to duty cured, seventy-three surveyed and invalided, eight deaths in hospital, and
384. sixty-four

Appendix.

sixty-four cases of sickness remaining in hospital and in the infirmary at the end of the year. The 1,149 cases entered during the twelve months were accounted for as follows : 807 returned to duty cured, 286 were sent to hospital, twenty-five were invalided from head quarters, and 31 remained on the sick-list at the end of the year. The twenty cases remaining on the sick-list from the year 1868 were discharged, two to hospital, two by invaliding, and sixteen to duty ; the two hospital cases returned cured.

In the beginning of the year embracing this Report, thirty-one patients sent from head quarters to Haslar Hospital, during the previous year, remained there ; eighteen of these have returned cured, one died, and twelve were invalided during this year.

During the year 1869, 288 men were sent from barracks to Haslar Hospital ; of this number, 214 returned cured, thirty-four were invalided, seven died there ; and thirty-three remained there at the end of the year.

The total number of Marines sent from barracks to Haslar Hospital, who were under treatment during the same period, was 319 ; of this number, 232 returned to duty, forty-six were invalided, eight died, and thirty-three remained there at the end of the year ; twenty-seven men belonging to this division were also invalided at Haslar Hospital during the year, having been sent there from different ships on the Home Station.

The deaths of twenty-seven men of this division are recorded in the year 1869.

Thirteen on the Home Station, viz. : nine at Haslar Hospital (six of this number sent there from barracks, and three from ships on the Home Station*) ; two embarked in coastguard† ships, in Ireland ; one at the depôt at Deal, and one drowned at Plymouth whilst embarking in Her Majesty's ship *Terrible*.

Six on the West Indian Station, Her Majesty's ships *Aboukir*, *Defence*, *Heron*, *Philomel*, *Raccoon*, *Terror*.

Two on the Pacific Station, both of Her Majesty's ship *Zealous*.

Two on the Mediterranean Station, Her Majesty's ships *Hibernia* and *Cruizer*.

Two on the China Station, Her Majesty's ships *Icarus* and *Rattler*.

One at the Cape of Good Hope, Her Majesty's ship *Seringapatam*.

One embarked in a ship belonging to the Irregular Force, Her Majesty's ship *Juno*.

The diseases which prevailed most in barracks during the year 1869, were those affecting the organs of respiration and digestion, rheumatism complicated in some cases with syphilis, venereal affections, phlegmons, ulcers, and wounds and injuries.

General Diseases, Section A.—Eighteen cases were entered under this head, causing a daily loss of service in the ratio of .9 per 1,000.

Three men were affected with measles, one in the first quarter and two in the third quarter of the year. This exanthem prevailed epidemically amongst children in the early part of the year ; the infection of one man was traced to a serjeant's child inhabiting a lobby attached to the man's room ; no cause could be traced for the infection of the other two ; they were removed immediately to Haslar Hospital ; the average duration of each case there was 29 days. The infected family was at once sent out of barracks.

Two cases of scarlet fever occurred during the year, in the first and third quarters, and were at once isolated by removal to hospital. Each case averaged thirty-eight days under treatment. This exanthem also prevailed to a great extent among children in the neighbourhood of the barracks.

Thirteen cases of primary fever, classed as "simple continued," were entered ; of which number, four were of moderate severity and required hospital treatment ; these cases averaged twenty-three days in Haslar, and the total duration of the fever averaged seven days. No loss occurred by death or invaliding from the sequelæ of these fevers or exantheas.

Under the group of General Diseases, Section B, 209 cases were entered ; of this number, more than fifty per cent. were sent to hospital.

There were fifty-nine cases of rheumatism ; thirty-three returned to duty, two remained on the sick-list, and twenty-four were sent to hospital ; seventeen of the last number returned to duty, four were invalided (two for rheumatism, one for phthisis, and one for disease of the heart). The average duration of each case in hospital was forty-eight days, and in barracks twelve days.

Syphilis

* Her Majesty's ships *Duke of Wellington*, *Asia*, and *Warrior*.

† Her Majesty's ships *Valiant* and *Royal George*.

Syphilis constitutes a very large proportion of sickness during the year embraced in this Report. The operation of the Contagious Diseases Act appears to have decreased the number of cases of this disease since its introduction. One hundred and sixteen cases of primary and twenty-one of secondary syphilis were entered on the sick-list during the year, making a ratio of 129·6 per 1,000 of the force at head quarters. The ratio in 1868 was 242·4 per 1,000. Seventy-four cases of primary and seven cases of secondary syphilis were sent to Haalar, the disease in these cases requiring lengthened treatment and comforts not obtainable in the barrack infirmary. Many of the primary cases were complicated with buboes and gonorrhoea, and averaged nearly thirty-four days' duration each in hospital. The secondary disease generally appeared in the form of skin eruptions and nocturnal pains in the bones, especially in the tibiae; seven of these cases required hospital treatment, where each case averaged fifty-one days' duration. The average duration of each case of primary syphilis in barracks was five days, and of secondary syphilis seven days, and the daily loss of service from both forms of the disease was in the ratio of 9·3 per 1,000 of the force serving at head quarters. Sixty-six cases of primary and seven cases of secondary syphilis returned cured, and eight cases of primary syphilis remained in hospital at the end of the year 1869. Many cases were contracted in the neighbouring towns which are exempt from the Act, as well as from distant towns and cities where the Act does not extend, by men on furlough, who often returned to barracks at the expiration of their leave infected with the disease.

No loss to the service occurred during the year embraced in this Report by death or invaliding of men serving at these head quarters from the sequelae of these diseases, although five men, belonging to this division, serving in ships on the Home Station, and sent to Haalar Hospital for treatment, were there invalided for the secondary disease.

There were eleven cases presenting symptoms of phthisis; one was invalided directly from head quarters (a marine of less than three years' service, who had never embarked, and appears to have spent the greater part of his time in gaol and on the sick-list), and ten were sent to hospital; four of the latter returned cured, five were invalided, and one remained there.

Diseases of the Organs of the Special Senses and Nervous System.—Forty-two cases were entered under this head; viz. two of paralysis, one of epilepsy, two of neuralgia, four of cerebral disease, three of insanity, twenty-three of ophthalmia, two of defective vision, and five of diseases of the ear. Of this number, twenty-two were treated in barracks, fifteen were sent to hospital, four were invalided directly from head quarters, and one remained on the sick-list in the barrack infirmary.

There were two cases of paralysis sent to hospital. In one man who was cured, the nerves of sensation of the upper and lower extremities were affected; loss of sensation was perfect, but the motor power was not much impaired. The other case, resembling the incipient stage of progressive locomotor ataxy, occurred in an old soldier, who remained in hospital at the end of the year. One case of epilepsy was sent to hospital for observation, and returned cured. There were four cases of disease, designated cerebral, entered during the year, and all were sent to hospital; one returned cured, one marine (belonging to the Plymouth division disembarked at this port, invalided from a foreign station) died there, one was invalided for paralysis, and one remained there.

Three cases of insanity were among the additions to the sick-list. One marine transferred from Woolwich on the breaking up of that division, having nearly nine years' service, and a man of intemperate habits, who was reported to conduct himself strangely both on shore and when embarked, appeared to be labouring under melancholia; he was therefore invalided directly from head quarters. The other two cases were sent to hospital, and both were there invalided.

Twenty-three cases appear under the head of ophthalmia; eighteen were discharged to duty and five sent to hospital, whence four returned to barracks cured and one remained there at the end of this year; one of this number was sent for dimness of vision, the sequela of syphilis; he returned to barracks, but appears in the list of invalids; the severity of the disease in the other cases, including one rheumatic of both eyes, one apthous of one eye, one granular of conjunctiva, and one chronic previously affected in China, requiring comforts not supplied to the infirmary, and whose treatment demanded the seclusion of rays of light,

Appendix.

&c., were sent to Haslar. The average duration of each case in hospital was nearly sixty-four days, and in barracks nine days.

The addition of two cases of defective vision was made to the sick-list, one remaining from the previous year—all were disposed of by invaliding. One was a case of imperfect sight in one eye, apparently resulting from a wound on the forehead above that eye; one was the sequela of syphilis; and the third was in a person of a strumous condition, both eyes being affected. Five cases of disease of the ear were also added; two were of sufficient note for remark that one was sent to hospital, where he remained; the other was invalided directly from head quarters.

Diseases of the Circulatory System.—There were twenty-five admissions to the sick-list; thirteen with functional disease of the heart, six with organic disease, and six with varicose veins.

There were thirteen cases of palpitation; eight of these were sent to hospital and were disposed of by returning two thence to barracks to duty, by invaliding four, three for organic disease of the heart and one for phthisis; two remained there. The average duration of each case in hospital was about fifty-six days, and in barracks six-and-a-half days.

Six cases of organic disease of the heart appear in the sick-list in 1869; three of them were invalided direct from head quarters, and three were sent to hospital, whence two were invalided in the course of the year, and the third remained there. The average duration of each case in hospital was twenty-three days, and in barracks five days.

There were six cases of varicose veins, all of which were invalided, the disease always affecting the veins of one or both lower extremities, by the obliteration of their valves; the vessels became enlarged and painful, unfitting the men for the duties they were called on to perform. One case was the result of phlebitis; the man was previously invalided at Lisbon Hospital. The average service of each of these men was nine years and 166 days.

Diseases of the Absorbent System and Ductless Glands.—Fourteen cases of bubo were entered under this head; ten were of sufficient importance, by threatening suppuration, to require hospital treatment, whence eight returned to barracks cured, and two remained there at the end of the year.

The average duration of each case in hospital was fifty-eight days, and in barracks nine days.

Diseases of the Respiratory System.—There were 156 cases during the twelve months, viz.:—One of laryngitis, 129 of catarrh, seventeen of bronchitis, six of pneumonia, and three of hæmoptysis; of which number thirty-three were sufficiently important to require notice, and were sent to hospital. The remainder were discharged to duty.

One man was affected with well-marked symptoms of laryngitis, and was at once sent to hospital, where he died five days after admission. He appeared at first to have benefited by the treatment adopted there; the symptoms returning, his decease was almost sudden. A post mortem examination was made, and the cause of death was found to be an aneurism of the thoracic aorta, at the junction of the arch with the descending portion pressing on the trachea, and in which the left recurrent laryngeal nerve was embedded and stretched.

There were 129 entries as catarrh, the majority being ordinary colds or coughs; eleven were of a more serious nature, and were sent to hospital, whence seven returned cured, and four were invalided, three of them for phthisis and one for rheumatism and catarrh. The average duration of each case in hospital was eighty-six days, and of all in barracks, over six days; seventeen cases of bronchitis were entered on the sick-list; three of them, yielding to treatment in the barrack infirmary, were discharged to duty, and thirteen, presenting more severe symptoms, were sent to hospital, whence seven returned cured; three remained there at the end of the year, and the remaining three were thence invalided, two for phthisis and one for palpitation. The average duration of each case in hospital was thirty-three days, and in barracks nearly six days.

Six cases of pneumonia appeared on the sick-list; all were sent to hospital, whence four returned to barracks cured, the other two were fatal; both were put on the sick-list the day before they were admitted to hospital, and both died within a few hours after their admission.

The

The average duration of each case in hospital was nearly twenty-eight days, and in barracks nearly three days.

Three men were put upon the sick-list with hæmoptysis. One was treated in the infirmary in barracks, and sent to duty cured; the remaining two were sent, to hospital, the disease being more severe. The cases required watching, and a more equable and higher temperature than the infirmary afforded; one returned to duty cured, and the other was invalided for phthisis. The average duration of each case in hospital was sixty days, and in barracks nearly seven days.

Diseases of the Digestive System.—The cases classified under this head, entered in the sick-list during the period of this return, number 206, and were:—cynanche, fifty-four; diarrhoea, thirty-one; colic and constipation, twelve; hæmorrhoids, three; hernia, nine; fistula in ano, one; hepatitis, one; icterus, two; and dyspepsia, 93. Most of these cases were under treatment in barracks, and being of a trivial nature, do not require any notice; 175 were discharged to duty. Those sent to hospital, twenty-five in number, require some special mention, in conjunction with eight cases invalided direct from head quarters, and are:—Six cases of cynanche tonsillaris, accompanied with considerable local congestion as well as constitutional disturbance, which were sent to hospital, the average duration of each case there being twenty-seven days, and all returning cured; twelve cases of dyspepsia, of an intractable character, which appeared to be caused by intemperate living in the majority of those which were sent to hospital, seven of whom returned cured, one died there of enteritis, and four were invalided there during the year, one for palpitation, one for abdominal aneurism, and two for organic disease of the heart.

One case of a marine who was attacked with severe colic, accompanied with great prostration of strength, and was sent to hospital; being relieved of the symptoms of colic, a few hours after his admission, he was observed to be suffering from dyspepsia, and suddenly expired. A post-mortem examination revealed extensive disease of the aortic valves, with dilatation and hypertrophy of the ventricles of the heart sufficient to account for his sudden death.

One case of diarrhoea, requiring restriction from animal and vegetable diet, was sent to hospital, and returned cured.

One case of hæmorrhoids was also sent to hospital, and returned to barracks cured.

A case of fistula in ano, succeeding a large abscess in the vicinity of the sphincter ani, was also sent to hospital, and returned cured.

One case of hepatitis was entered on the sick-list during the period of this Report; the disease appeared to be mild but chronic, and the man was sent to hospital, whence he returned cured.

There were two cases of icterus, of moderate severity; both were sent to hospital, and both cured.

The average duration of each case of dyspepsia in hospital was twenty-six days, and in barracks five days. Nine persons were admitted with hernia; one, requiring a few days to complete time, was returned to duty: eight were invalided; six of the latter disembarked from ships for that purpose; one was detected on disembarkation, and one was a bandsman. Average service of each, fourteen years, 102 days.

Diseases of the Urinary and Generative System.—Of the total admissions under this head, numbering 161, one was invalided, thirty-four were sent to hospital, ten remained on the sick-list; the rest were discharged. There were six cases of Bright's disease, or albuminuria; one was discharged to duty, and five were sent to hospital; of the latter, three returned cured, one remained there at the end of the year, and one was invalided, the man having been previously invalided from Her Majesty's ship Royal Oak, on the Mediterranean Station. The average duration of each case in hospital was sixty-eight days.

There were a great many entries of men with gonorrhoea during the year; the ratio of cases was higher than it had been for the eight previous years, and consequently shows an increase since the introduction of the Contagious Diseases Act; this may probably be accounted for by entering every man on the sick-list since the Act came into operation, whereas, prior to that, many persons only slightly affected had medicines administered without placing their names on the sick-list.

There were 126 cases of gonorrhoea entered on the sick-list during the twelve months; seventeen required hospital treatment, and were sent to Haslar, whence
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fifteen returned to head quarters, and two remained there at the end of the year; one sent there in 1868 with gonorrhoea, was invalided for morbus cordis; there were seven cases in the infirmary at the end of 1869; the remainder went to duty. The average duration of each case in hospital was nearly thirty-five days, and in barracks somewhat over twelve days.

Of the three admissions with stricture, one was complicated with fistula in perineo, the sequela of an abscess, and was invalided; the others were spasmodic strictures, and were sent to hospital, whence both returned to duty.

The severity of the affection requiring greater conveniences and comforts than the infirmary in barracks afforded, ten of the twenty-five cases of orchitis were sent to hospital, whence nine returned to duty, and one remained there at the end of the year; three of the remaining number were on the infirmary sick-list, and the rest went to duty. Some of these cases were idiopathic, some were produced by accidental violence, and others resulted from suppressed gleet or gonorrhoeal discharges. The average duration of each case in hospital was thirty-seven days; in barracks, ten days.

Diseases of the Organs of Locomotion.—Of the three cases entered under this head, viz., two of diseases of the bones and one of the joints, one of the former was disposed of by invaliding, direct from head quarters, for necrosis of the clavicle, partially disabling the motions of the shoulder joint, the patient having been previously invalided from the Mediterranean; the other was a case of necrosis of the inferior maxilla, which was sent to hospital, and remained there at the end of the year.

The case of joint disease was thickening of the synovial membrane of the knee joint, succeeding acute inflammation while the man was serving on the Australian Station, in the Challenger, from which ship he was invalided home, and subsequently out of the service, from head quarters.

Diseases of the Cellular Tissue and Cutaneous System.—The entries under this head were very numerous. Of the 143 admitted, only sixteen were of sufficient importance to require hospital treatment; the remainder, with the exception of nine remaining on the sick-list in the infirmary at the end of the year, were sent to duty.

A man with a tumour on the upper part of the forehead went to hospital in the beginning of the year 1869, and remained there at the end of the year. Necrosis of the frontal bone supervened.

Of the large number entered (82), only two cases of phlegmon and abscess required hospital treatment; one was an abscess of some size in the vicinity of the rectum, and must have been of some severity, as he was 155 days there before he returned to duty: the other was a deep-seated phlegmon affecting the middle joint of the index finger, and requiring its removal; he was invalided, the loss of the finger disabling him for the duties of a soldier.

Twenty-six cases of ulcer occurred, eight required hospital treatment, six of whom returned to duty and one remained there; one man, just disembarked, sent there with this affection, was eventually invalided for cerebral disease. The average duration of each case in hospital was sixty days, and in barracks nine days.

Thirty-three cases of different forms of skin eruption, including ten eczema, one lepra, four herpes, thirteen scabies, four impetigo, one psoriasis, were under treatment during the year in the infirmary; three remained on the sick-list, and, with the exception of five sent to hospital, the rest went to duty.

Of the three cases of eczema, one of lepra, and one of herpes, sent to Haslar, four returned to head quarters cured, and one remained there at the close of the year.

The average duration of each case in hospital was forty days, and in barracks nearly ten days.

Unclassed Diseases.—Seven men affected with debility, from various causes, were under treatment, the average duration of each case was eight days in barracks; one was sent to hospital and returned well in fourteen days. Only one man was affected with delirium tremens during the twelve months, and he was at once removed to Haslar, whence he returned to duty in thirty-one days.

Wounds and Injuries.—Only fourteen of the 164 admissions under this head, were severe enough to require removal to hospital, and one to be invalided from the service; four remained on the infirmary sick-list at the end of the year, the remaining

remaining number went to duty. Fifty-one wounds were admitted, of which number only four were removed to hospital, the remainder were of a trivial nature. One man attempted to commit suicide, a second had a lacerated wound of the integuments of the ankle, a third a scalp wound, and the fourth, who had been previously invalided from a foreign station for a wound on the dorsum of his foot, the cicatrix of which ulcerated on his arrival in England, required hospital treatment, whence he was invalided from the service with an enlarged metatarsal bone of the great toe; the three other hospital cases returned to duty. The average duration of each case in hospital was twenty-nine days and of each case in barracks nearly ten days. Seven cases of fracture are returned during the year embraced in this Report; one was an old fracture of the arm (resulting in paralysis of the limb), occurring on board ship, whence he returned to England invalided, and was invalided out of the service from head quarters; three cases were removed to Haslar Hospital, viz., two of the fibula, and one of the phalanx of the great toe; two came back to duty and one remained there at the end of the year. The average duration of each case in hospital was fifty-seven days and of each case in barracks thirteen days. The remaining three cases were treated in the infirmary; viz., one of the radius, one of a metacarpal bone, and one of a phalanx of the thumb, and resumed their duties.

The number of cases of sprain during the year amounts to thirty; with the exception of one remaining on the infirmary sick-list and three sent to hospital; they were not of any importance: two were removed to Haslar during the twelve months for severe sprains of the ankle joint, one returned to barracks, the other remained there under treatment; the third case was a sprain of the knee joint requiring rest, &c.; he returned to duty. The average duration of each case in hospital was thirty-five days, and in barracks between nine and ten days.

Five of the number admitted with contusions (seventy-three in all) which were sent to hospital, each case averaging thirty days there and all returning cured, were of sufficient severity to note, that one of the right side was caused by falling over a barrow; one of the right leg, by falling over a cliff; one of the knee, by a kick of a thick boot; one by slipping down the hold of a passage steamer, contusing the hip and leg, and the fifth was contusion of an eye with effusion of blood in the anterior chamber, by an accidental blow from a potato; two remained on the infirmary sick-list at the end of the year, the remainder went to duty; the average duration of each case in barracks was six days.

There were only two cases of burns and scalds; one required hospital treatment on account of its severity, which was due to the accidental explosion of benzoline oil; the other case treated in the infirmary went to duty.

The average service of each man invalided in 1869 was eight years and thirty-six days.

The total number of men belonging to this division invalided during the twelve months embraced in this report was 100, which includes every man taken off the effective strength of the Portsmouth division on account of inefficiency from disease or injury, and in which number are included all Marines disembarked from home ships, or from ships proceeding to Foreign Stations, or discharged from other home hospitals to await the monthly survey, if they were fit subjects for invaliding, in the opinion of the medical officer of their own division, and foreign invalids considered unfit for further service.

Twenty-seven men were invalided directly from headquarters; the majority of these were either disembarked from ships for this purpose, or had been previously invalided on Foreign Stations for diseases rendering them wholly inefficient. The remainder were disabled in consequence of chronic disease, either functional or organic, or the sequelæ of disease or injury.

One Marine under three years' service, who had never embarked, was invalided for phthisis.

One man under nine years' service, for insanity, doubtless caused by hard drinking.

Three for defective vision; one under ten years, one under seven, and the third under five years' service; one case resulted from a wound of the supra-orbital nerve, a second was the sequela of syphilis, the third of struma.

Three for organic disease of the heart; one less than five years' service, following rheumatism; in one under eleven years, a foreign invalid, the cause was not

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not ascertained; the third just over two years' service, constitutional. Average service, five years and 343 days.

Six for extensive varicose veins of the legs. The average service of these men was nine years and 166 days. One of this number had been invalided at Lisbon for this affection, which was caused by phlebitis.

One for disease of the ear, whose service extended over nearly nine years, and who had been affected a long time; the temporal bone was affected.

Eight for hernia, whose average service was fourteen years and eight days; the highest being nearly twenty-one years, the lowest nearly seven. The greater number of these men were ruptured whilst detached from head quarters, and were sent to barracks to be invalided. One Marine was discovered to be ruptured when examined on disembarkation from a ship, and the eighth case occurred in a bandsman, and appeared to be caused by the use of his wind instrument. Six of this number were disembarked from ships for the purpose of being invalided, or were foreign invalids.

During the period embraced in this Report, the zymotic epidemic diseases which prevailed in the locality surrounding these barracks, and which might have affected the health of the men of this division had they originated or been introduced into the buildings, were measles and scarlet fever; they appeared to prevail epidemically amongst children, infecting but few of the grown-up population; the former disease occurred in the spring, but the latter commencing at the close of autumn continued during the greater part of the winter, and was of a more fatal character than ordinary. A case of measles in the person of a serjeant's child, who inhabited a lobby in one of the pavilions, occurred in the early spring; the family was at once sent out of barracks. Notwithstanding all the precautions taken to destroy the infection, and thereby prevent the spread of the poison, a Marine, who inhabited a barrack-room attached to this lobby, became infected within a very short time; he might have been exposed to the infection out of barracks, but his attack succeeding shortly after the child's case would lead to the conclusion that he was infected in barracks. No further cases occurred till July, when two men were sent to hospital with measles within a fortnight of each other, the disease not appearing in barracks any more during the year.

A sporadic case of scarlet fever occurred in the month of March, in a serjeant who lived out of barracks, and was employed in the police. No other case occurred till the month of November, when a private belonging to the Chatham Division, waiting here for embarkation, became infected. At this time the disease was known to be affecting children epidemically. No more cases occurred during the year.

In consequence of a very large number of men belonging to this division being married, and living out of barracks, it was necessary, when any of their families were infected, to restrict them from entering the barracks, and at the same time to isolate them as much as it was in our power from the non-infected; by such measures being carried out the disease was kept out of these buildings.

The average number of married women living in the neighbourhood during the year was 300; but there is a larger number of married men in the division. Many of the women leave the neighbourhood when their husbands embark for Foreign Stations; many others follow their husbands to different home ports where they are embarked.

The number of children living in the neighbourhood of the barracks, whose fathers belong to this division, was about 1,100.

The daily average number of women for whom medicines were prescribed in barracks at the infirmary, during the twelve months, was ten.

The daily average number of children prescribed for at the infirmary was six.

The daily average number of women and children visited outside of the barracks during the year was seven.

ABSTRACT showing the **NUMBER of MEN INVALIDED** and **CAUSE of INVALIDING**, with the **Ratio per 1,000**, for the year 1869, from the *Portsmouth* Division of **ROYAL MARINE LIGHT INFANTRY**, and showing the **Established Strength** of the Division **Afloat and on Shore** during the Year.

CAUSE OF INVALIDING.		Number Invalided.		Strength.	Ratio per 1,000 of the Established Strength.
		Number of Each.	TOTAL.		
General Diseases, Section B. -	Rheumatism - -	9	39	3,423	
	Secondary Syphilis -	5			
	Scrofula - - -	1			
	Phthisis - - -	24			
Diseases of the Ner- vous System and Organs of the Special Senses -	Cerebral Disease -	5	16		
	Paralysis - - -	1			
	Epilepsy - - -	1			
	Dementia - - -	4			
	Cataract - - -	1			
	Defective Vision -	3			
	Diseases of the Ear -	1			
Diseases of the Cir- culatory System	Diseases { Functional	2	27		
	of the { Organic -	16			
	Heart - - -	3			
	Aneurism - - -	6			
Diseases of the Di- gestive System -	Varicose Veins -	6	8		
	Hernia - - -	8			
Diseases of the Uri- nary and Gene- rative System -	Bright's Disease -	1	2		
	Stricture - - -	1			
Diseases of the Or- gans of Locomo- tion - - -	Diseases of the Bones	1	3		
	Diseases of the Joints	2			
Wounds, Injuries, and Fractures -	Results of - - -	5	5		
TOTAL Invalided - - -		-	100		

Average Service of each Man Invalided during the year 1869 - - 8 years 36 days.

Appendix.

TABLE showing the Ratio of Cases of SYPHILIS and GONORRHOEA for
Ten Years, from 1860 to 1869, inclusive.

YEARS.	Syphilis.	Gonorrhoea.	TOTAL.
1860 - - - -	329·2	172·5	501·7
1861 - - - -	237·3	110·7	348·
1862 - - - -	272·4	114·4	386·8
1863 - - - -	232·4	112·9	344·5
1864 - - - -	256·2	86·6	342·8
1865 - - - -	190·3	64·5	253·8
1866 - - - -	183·2	83·1	266·3
1867 - - - -	204·9	80·9	285·8
1868 - - - -	242·4	99·7	342·1
1869 - - - -	129·6	119·3	248·9

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MEDICAL AND SURGICAL REPORT
OF THE
ROYAL MARINE DIVISION AT PLYMOUTH,
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
ASSISTANT SURGEON S. BAMFIELD.

MEDICAL and SURGICAL REPORT of the ROYAL MARINE DIVISION at

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	-	1	-	1	-	-	-
	Measles - - - - -	-	1	-	1	-	-	-
	Enteric Fever - - -	-	1	-	1	-	-	-
	Simple Continued Fever -	-	15	4	11	-	-	-
	Ague - - - - -	-	1	1	-	-	-	-
II. General Diseases, Section B.	Cholera (simple) - - -	-	1	1	-	-	-	-
	Rheumatism - - - -	4	89	37	54	-	-	2
	Syphilis, Primary - -	4	137	34	107	-	-	-
	Syphilis, Secondary -	3	16	3	16	-	-	-
	Scrofula - - - - -	-	2	-	2	-	-	-
III. Disease of the Nervous System, and Organs of the Special Senses.	Phthisis Pulmonalis -	-	12	1	10	-	1	-
	Congestion of Brain -	1	-	1	-	-	-	-
	Softening of Brain -	-	1	-	1	-	-	-
	Paralysis - - - - -	-	1	-	1	-	-	-
	Epilepsy - - - - -	-	4	-	4	-	-	-
	Neuralgia - - - - -	-	14	7	7	-	-	-
	Vertigo - - - - -	-	6	2	4	-	-	-
	Amentia - - - - -	-	1	-	1	-	-	-
	Dementia - - - - -	-	3	-	3	-	-	-
	Keratitis - - - - -	-	1	-	1	-	-	-
	Impaired Vision - - -	-	3	-	3	-	-	-
	Ophthalmia - - - - -	-	21	13	8	-	-	-
	Amaurosis - - - - -	1	-	-	-	-	1	-
	Iritis - - - - -	-	1	-	1	-	-	-
	Diseases of the Ear -	-	7	5	2	-	-	-
	Diseases of the Nose -	-	1	-	1	-	-	-
IV. Diseases of the Circulatory System.	Disease of / Functional the Heart / Organic -	1	42	8	35	-	-	-
	Varicose Veins - - -	-	6	1	5	-	-	-
	Enlargement of Glands -	-	7	1	4	-	2	-
V. & VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (Symp.) - - -	-	14	2	12	-	-	-
	Enlargement of Glands -	-	2	1	1	-	-	-
VII. Diseases of the Respiratory System.	Diseases of the Larynx -	-	1	-	1	-	-	-
	Catarrh - - - - -	3	98	71	23	-	-	7
	Bronchitis - - - - -	2	31	11	20	-	-	2
	Pneumonia - - - - -	-	8	-	8	-	-	-
	Pleurisy - - - - -	-	6	2	4	-	-	-
	Hæmoptysis - - - - -	-	6	-	6	-	-	-
VIII. Diseases of the Digestive System.	Cynanche - - - - -	-	34	26	7	-	-	1
	Mumps - - - - -	-	2	-	2	-	-	-
	Jaundice - - - - -	-	2	2	-	-	-	-
	Dyspepsia - - - - -	-	22	17	5	-	-	-
	Dysentery - - - - -	-	1	-	1	-	-	-
	Diarrhoea - - - - -	-	94	84	9	-	-	1
	Colic and Constipation -	-	20	17	3	-	-	-
	Hæmorrhoids - - - -	-	4	1	3	-	-	-
	Hernia - - - - -	-	14	5	-	-	5	4
	Worms - - - - -	-	1	1	-	-	-	-

Plymouth, between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
1	-	-	-	-	-	-	-	-	-	1	-
1	-	-	-	-	-	-	-	-	-	1	-
-	-	1	-	-	-	-	-	-	-	1	-
9	33	6	22	-	-	-	-	-	-	15	55
-	-	1	4	-	-	-	-	-	-	1	4
-	-	1	3	-	-	-	-	-	-	1	3
51	77	38	69	5	14	-	-	-	-	93	205
88	413	47	308	2	29	-	-	-	-	141	856
5	-	11	-	-	-	-	-	-	-	19	57
-	-	2	-	-	-	-	-	-	-	2	-
3	6	5	-	4	59	-	-	-	-	12	65
-	-	-	-	-	-	-	-	-	-	1	2
-	-	1	-	-	-	-	-	-	-	1	-
-	-	1	-	-	-	-	-	-	-	1	-
3	-	1	-	-	-	-	-	-	-	4	-
4	9	7	19	2	4	1	3	-	-	14	35
3	9	3	3	-	-	-	-	-	-	6	12
-	-	1	-	-	-	-	-	-	-	1	-
1	1	2	1	-	-	-	-	-	-	3	2
1	-	-	-	-	-	-	-	-	-	1	-
1	1	2	-	-	-	-	-	-	-	3	1
8	11	13	24	-	-	-	-	-	-	21	35
-	-	1	1	-	-	-	-	-	-	1	33
-	-	1	1	-	-	-	-	-	-	1	1
2	6	5	10	-	-	-	-	-	-	7	16
1	-	-	-	-	-	-	-	-	-	1	-
27	11	12	19	3	9	-	-	-	-	43	52
2	-	4	6	-	-	-	-	-	-	6	6
2	8	3	-	2	-	-	-	-	-	7	8
8	33	6	-	-	-	-	-	-	-	14	33
-	-	1	-	1	10	-	-	-	-	2	10
-	-	1	-	-	-	-	-	-	-	1	-
46	147	39	134	13	71	-	-	-	-	101	361
12	80	9	54	10	41	-	-	-	-	33	240
5	-	2	-	1	-	-	-	-	-	8	-
4	2	1	3	1	2	-	-	-	-	6	7
4	3	1	-	1	1	-	-	-	-	6	4
16	37	13	115	5	31	-	-	-	-	34	183
-	-	-	-	2	9	-	-	-	-	2	9
1	12	1	9	-	-	-	-	-	-	2	21
8	19	13	41	1	1	-	-	-	-	23	61
-	-	1	-	-	-	-	-	-	-	1	-
48	129	39	88	7	17	-	-	-	-	94	224
9	19	8	22	3	8	-	-	-	-	20	49
-	-	3	6	1	-	-	-	-	-	4	6
4	9	3	44	2	13	-	-	-	-	14	66
1	2	-	-	-	-	-	-	-	-	1	2

MEDICAL and Surgical Report of the Royal Marine Division at *Plymouth*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
VIII.—Diseases of the Digestive System— <i>contd.</i>	Stomatitis - - -	-	3	1	2	-	-	-
	Hæmatemesis - - -	-	1	-	1	-	-	-
	Hepatitis - - -	-	5	1	4	-	-	-
	Fistula in Ano - - -	-	2	1	1	-	-	-
	Gastritis - - -	-	3	-	3	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	1	-	1	-	-	-
	Hæmaturia - - -	-	1	-	1	-	-	-
	Cystitis - - -	-	1	-	1	-	-	-
	Nephritis - - -	-	1	-	1	-	-	-
	Renal Calculi - - -	-	1	1	-	-	-	-
	Gonorrhœa - - -	6	157	24	139	-	-	-
	Urinary Fistula - - -	-	1	-	1	-	-	-
	Distention of Bladder - - -	-	1	1	-	-	-	-
	Hydrocele - - -	-	1	-	1	-	-	-
	Stricture - - -	-	6	-	6	-	-	-
	Sarcocoele - - -	-	1	-	1	-	-	-
	Orchitis - - -	-	15	2	13	-	-	-
	Spermatorrhœa - - -	-	1	1	-	-	-	-
	Incontinence of Urine - - -	-	2	-	2	-	-	-
XI. Diseases of the Organs of Locomotion.	Diseases of the Bones - - -	-	3	1	2	-	-	-
	Disease of the Joints - - -	-	6	1	4	-	1	-
	Curvature of Spine - - -	-	1	-	1	-	-	-
	Diseases of the Bursæ - - -	-	2	-	2	-	-	-
XII. & XIII. Diseases of the Cellular Tissues and Cutaneous System.	Porrigio - - -	-	2	-	2	-	-	-
	Pityriasis - - -	-	1	-	1	-	-	-
	Phlegmon and Abscess - - -	1	101	85	17	-	-	-
	Ulcer - - -	2	53	29	24	-	1	1
	Lichen - - -	-	2	1	-	-	-	1
	Emphysema - - -	-	1	1	-	-	-	-
	Herpes - - -	-	3	2	1	-	-	-
	Erythema - - -	-	1	1	-	-	-	-
	Scabies - - -	1	36	17	20	-	-	-
	Warts - - -	-	2	1	-	-	-	1
	Psoriasis - - -	-	7	3	4	-	-	-
	Eczema - - -	-	11	8	3	-	-	-
	Ichthyosis - - -	-	2	-	2	-	-	-
Unclassed - - -	Debility - - -	-	13	10	3	-	-	-
	Delirium Tremens - - -	-	5	2	3	-	-	-
	Tremor Ebriosus - - -	-	2	-	2	-	-	-
Wounds and Injuries -	Wounds - - -	2	26	26	1	-	-	1
	Fractures - - -	-	6	1	3	-	1	1
	Dislocations - - -	-	1	-	1	-	-	-
	Sprains - - -	-	51	27	22	-	-	2
	Contusions - - -	-	62	49	11	-	-	2
	Burns and Scalds - - -	-	9	6	3	-	-	-
	Submersion and Drowning - - -	-	3	1	-	2	-	-
	Contraction of Finger - - -	-	1	-	-	-	-	-
	Lameness of Right Leg - - -	-	1	-	1	-	-	-
TOTALS - - -		31	1,373	663	700	2	13	26

between the 1st of January and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
2	-	1	1	-	-	-	-	-	-	3	1
-	-	1	-	-	-	-	-	-	-	1	-
2	4	2	-	1	-	-	-	-	-	5	4
-	-	1	18	1	-	-	-	-	-	2	18
-	-	3	-	-	-	-	-	-	-	3	-
-	-	1	-	-	-	-	-	-	-	1	-
-	-	1	-	-	-	-	-	-	-	1	-
1	-	-	-	1	-	-	-	-	-	1	-
-	-	-	-	-	-	1	3	-	-	1	3
67	157	83	153	7	5	-	-	-	-	163	411
-	-	-	-	1	-	-	-	-	-	1	-
-	-	1	7	-	-	-	-	-	-	1	7
-	-	1	-	-	-	-	-	-	-	1	-
2	5	2	-	2	15	-	-	-	-	6	20
-	-	-	-	1	-	-	-	-	-	1	-
3	-	7	72	5	-	-	-	-	-	15	72
1	15	-	-	-	-	-	-	-	-	1	15
-	-	1	-	1	1	-	-	-	-	2	1
1	4	2	-	-	-	-	-	-	-	3	4
3	9	2	-	1	-	-	-	-	-	6	9
-	-	1	-	-	-	-	-	-	-	1	-
1	-	1	-	-	-	-	-	-	-	2	-
-	-	2	-	-	-	-	-	-	-	2	-
-	-	-	-	1	-	-	-	-	-	1	-
45	196	45	276	11	16	-	-	-	-	102	497
33	156	20	32	-	-	-	-	-	-	55	233
1	4	1	14	-	-	-	-	-	-	2	18
-	-	1	19	-	-	-	-	-	-	1	19
1	-	2	21	-	-	-	-	-	-	3	21
1	4	-	-	-	-	-	-	-	-	1	4
19	41	17	13	-	-	-	-	-	-	37	55
1	1	1	1	-	-	-	-	-	-	2	2
4	10	3	46	-	-	-	-	-	-	7	56
6	38	4	59	1	11	-	-	-	-	11	108
-	-	2	-	-	-	-	-	-	-	2	-
1	4	9	23	3	6	-	-	-	-	13	33
-	-	3	5	1	1	1	1	-	-	5	7
-	-	1	-	1	-	-	-	-	-	2	-
12	81	11	79	3	17	-	-	-	-	28	185
1	34	3	44	2	-	-	-	-	-	6	78
1	-	-	-	-	-	-	-	-	-	1	-
19	48	26	29	6	38	-	-	-	-	51	115
27	98	34	161	1	2	-	-	-	-	62	261
4	72	4	15	1	-	-	-	-	-	9	87
1	2	2	-	-	-	-	-	-	-	3	2
-	-	1	28	-	-	-	-	-	-	1	28
-	-	-	-	1	-	-	-	-	-	1	-
639	2,061	612	2,121	119	431	3	7	-	-	1,404	5,099

REPORT ON THE HEALTH

OF THE

ROYAL MARINE LIGHT INFANTRY DIVISION, PLYMOUTH,

For the Year 1869,

By Assistant Surgeon S. BAMFIELD.

REMARKS.

THE strength of this division was considerably raised in the early part of this year, by the breaking up of the Woolwich division, and the transfer of a portion of the men and their families. The mean strength of the division for the year was 1,618; in 1868 it was 1,371. The total number of sick during the year was 1,373; which shows a slight improvement in the health of the division, the percentage falling from 5 $\frac{1}{2}$ in 1868, to 4 $\frac{1}{2}$ in the present year.

The district of East Stonehouse, in which the Marine barracks are situated, seems to have been comparatively free from epidemics during the year, measles being the only one of which mention is made. This disease is reported to have been prevalent amongst the children during the third quarter of the year, and to have been of a severe character, several deaths having occurred, and from the returns of the registrar it seems to have been equally severe and fatal throughout the parish. One case only occurred amongst the men; this was at once transferred to the hospital.

Towards the end of March a great change was effected by the closure of the divisional infirmary, and the transfer of all patients to the Royal Naval Hospital; since then all but trivial cases have been at once sent to hospital, which will account for the disproportion between the number of sick and the total days' sickness.

Two deaths occurred during the year, both from the same cause, viz., drowning by falling overboard from a river steamer; both happened in the same quarter, but on different dates, one on 13th July, the other on 26th August.

Thirteen men were brought forward from head quarters and invalided; the total number of men belonging to the division who were invalided during the year was 104.

In Class I., General Diseases, there is a great decrease in the numbers, as compared with the previous year, and especially with regard to enteric fever: in 1868 twenty-four cases occurred; this year one only; single cases occurred also of scarlatina, measles, and ague; eleven of simple continued, and four of febricula: these I have returned as simple continued fever; one case of ague occurred, but is mentioned as trivial, the man returning to his duty on the third day. One case of simple cholera also is reported, and the symptoms are described as severe; it was, however, treated on the convalescent list and discharged to duty on the fourth day.

In Class II. there are eighty-nine cases of rheumatism (in this I include all cases of muscular rheumatism, lumbago, sciatica, and pleurodynia); of these, fifty-four required hospital treatment. The next important disease in this class is syphilis; here, though the numbers are considerable, there is some improvement. The total admissions for this year are, primary 137, secondary sixteen; the corresponding numbers for 1868 are 148 and twenty-seven, there being at the same time an increase in the strength, of 247 men. Twelve cases of phthisis occurred, one having been invalided from Haulbowline Hospital was brought forward from head quarters; the rest, with one exception, were sent to hospital.

In Class III. occur several varieties of Brain Disease; they were generally invalids from foreign stations, who were transferred at once to hospital; two cases of dementia occurred at head quarters, but they are said to have shown signs of mental deficiency for at least a year: three cases of impaired vision were sent to hospital;

hospital; one seems to have been incipient amaurosis, another was due to pterygium extending to the cornea; for the third, no cause is assigned. One man was invalided for amaurosis; the left eye was destroyed by an accident, and after a few days, blindness of the right followed. The case of iritis was of syphilitic origin. The diseases of the ear present no points of interest. The case of disease of the nose was one of severe epistaxis.

In Class IV., Functional Diseases of the Heart are numerous, and largely in excess of the previous year (forty-two against twenty): there does not appear to be any means of accounting for it. Of organic disease there were six cases, five of which were sent to hospital.

In Classes V. and VI. there were fourteen cases of sympathetic bubo, twelve of which required hospital treatment. The case of enlargement of the glands sent to hospital was one of scrofulous disease of the glands of the neck.

In Class VII. catarrh and bronchitis are the most frequent complaints, ninety-eight of the former and thirty-one of the latter being recorded; of the former, twenty-three, and of the latter twenty, required hospital treatment; eight cases of pneumonia occurred, all of which were sent to hospital; of six cases of pleurisy, four were sent to hospital; six cases of hæmoptysis occurred; in none was any phthisical tendency discovered; all were sent to hospital.

Class VIII. presents a great variety of diseases: cases of diarrhoea were numerous, amounting to ninety-four, two-thirds of which, as might be expected, occurred during the autumn quarter; nine cases required hospital treatment. The case of dysentery was an invalid from the China Station. Fourteen cases of hernia occurred; of these, five were invalided, four remained for disposal, and five were sent to duty. Under dyspepsia I have included one case returned as vomitus, and two of gastrodynia; three cases of gastritis are given; all were sent to hospital. There were four cases of hepatitis, and one of enlargement of the liver; this seems to have also been a case of hepatitis, and is returned as such.

In Classes IX. and X., there are single cases of many of the diseases of the urinary and generative organs; most of them were sent at once to hospital. There does not appear to have been any diminution in the gonorrhoeal cases; as far as numbers go, there is a slight increase, 157 for this year, against 145 in 1868; but, as I have before said, there was an increase in the strength of the division. The cases of fistula, stricture, hydrocele, and sarcocele were mostly cases of long standing, the men being invalided from various ships; fifteen cases of orchitis are recorded, the greater portion being the result, apparently, of injuries.

Class XI. Under Diseases of the Bones are included two cases of periostitis and one of ostitis. In diseases of the joints are included four of synovitis, one of arthritis, and one of ankylosis; the last supervened after fracture of the ankle joint; the patient was invalided from head quarters. There was also a case of lateral curvature of the spine.

In Classes XII. and XIII., cases of phlegmon and abscess are very numerous, amounting to 101; the majority were treated on the convalescent list. Of ulcers there were also fifty-three cases, twenty-four of which required hospital treatment. The person who was invalided was sent home from Bermuda, where he had been surveyed; he had been repeatedly under treatment with only temporary benefit, and his first period of service having nearly expired, it was thought advisable to invalid him. Most of the usual skin diseases were represented, but in small numbers, except scabies, of which there were thirty-six cases. The two cases of warts were of syphilitic origin. Thirteen cases of debility occurred; three required hospital treatment, two being invalids from the coast of Africa. Five cases of delirium tremens and two of tremor ebriosus occurred.

Wounds, sprains, contusions, and burns, were tolerably numerous, but unimportant in character. Six fractures occurred: three required hospital treatment; one was an invalid, who had received a compound fracture of the left leg. Three cases of submersion occurred; two proved fatal; these I have noticed already; one man was invalided for contraction of the fingers, the result of sloughing following a severe contusion. The case returned as lameness of the right leg is that of a man who, whilst cutting wood on shore, divided the right tendo-Achilles with the axe; whilst under treatment, he slipped, and the divided ends again became separated, and retracted so considerably that further union was impossible.

MEDICAL AND SURGICAL REPORT
OF THE
ROYAL MARINE DIVISION AT CHATHAM,
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
DEPUTY INSPECTOR GENERAL DR. H. J. DOMVILLE, C.B.

MEDICAL and SURGICAL REPORT of the ROYAL MARINE DIVISION at *Chatham*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	-	3	3	-	-	-	-
	Enteric Fever - - -	-	1	-	-	1	-	-
	Simple Continued Fever - - -	-	1	1	-	-	-	-
	Ague - - - - -	2	6	7	-	-	1	-
	Febricula - - - - -	-	2	2	-	-	-	-
	Mumps - - - - -	-	3	3	-	-	-	-
	Erysipelas - - - -	-	2	1	-	-	-	1
II. General Diseases, Section B.	Rheumatism - - - -	7	65	55	-	-	15	2
	Gout - - - - -	-	2	2	-	-	-	-
	Syphilis, Primary - - -	12	111	112	-	-	3	8
	" Secondary - - -	2	23	21	-	-	2	2
	Cancer - - - - -	-	1	-	-	-	1	-
	Scrofula - - - - -	-	2	1	-	-	1	-
	Phthisis Pulmonalis - -	3	20	3	-	3	15	2
III. Diseases of the Nervous System and Organs of the Special Senses.	Syncope - - - - -	-	1	1	-	-	-	-
	Sunstroke - - - - -	-	1	1	-	-	-	-
	Vertigo - - - - -	-	7	6	-	-	1	-
	Dementia - - - - -	-	4	2	1	-	1	-
	Epilepsy - - - - -	1	5	1	-	-	5	-
	Neuralgia - - - - -	-	3	3	-	-	-	-
	Brain Disease - - - -	-	1	1	-	-	-	-
	Iritis - - - - -	-	1	-	-	-	-	1
	Visus Brevior - - - -	-	3	-	-	-	3	-
	Conjunctivitis - - - -	-	6	6	-	-	-	-
	Ophthalmia - - - - -	1	3	3	-	-	1	-
	Amaurosis - - - - -	1	3	1	-	-	3	-
	Diseases of the Ear - -	-	3	2	-	-	1	-
IV. Diseases of the Circulatory System.	Disease of the { Functional -	2	26	15	-	-	13	-
	Heart - { Organic -	1	7	-	-	1	7	-
	Pericarditis - - - -	-	1	-	-	-	-	-
	Varicose Veins - - -	-	11	2	-	1	8	1
V. and VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - - -	-	13	12	-	-	-	1
VII. Diseases of the Respiratory System.	Diseases of the Larynx -	-	3	1	-	-	2	-
	Catarrh - - - - -	1	56	55	-	-	-	2
	Bronchitis - - - - -	1	35	31	-	-	4	1
	Asthma - - - - -	-	2	-	-	-	1	-
	Pneumonia - - - - -	-	3	2	-	1	-	-
	Pleurisy - - - - -	-	1	1	-	-	-	-
	Hæmoptysis - - - -	-	1	1	-	-	-	-

between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
3	66	-	-	-	-	-	-	-	-	3	66
-	-	-	-	1	97	-	-	-	-	1	97
1	17	-	-	-	-	-	-	-	-	1	17
-	-	5	240	1	24	-	-	-	-	6	264
-	-	1	30	1	12	-	-	-	-	2	42
2	70	1	42	-	-	-	-	-	-	3	112
-	-	1	11	1	12	-	-	-	-	2	23
14	548	39	1,565	11	315	1	4	-	-	65	2,432
-	-	-	-	2	17	-	-	-	-	2	17
80	3,616	30	1,150	1	22	-	-	-	-	111	4,788
17	572	4	113	2	24	-	-	-	-	23	709
-	-	1	65	-	-	-	-	-	-	1	65
-	-	1	11	1	75	-	-	-	-	2	86
5	194	12	402	3	218	-	-	-	-	20	814
1	2	-	-	-	-	-	-	-	-	1	2
-	-	1	2	-	-	-	-	-	-	1	2
1	35	3	19	3	107	-	-	-	-	7	161
1	9	2	9	1	11	-	-	-	-	4	29
4	107	1	45	-	-	-	-	-	-	5	152
1	5	2	19	-	-	-	-	-	-	3	24
-	-	-	-	1	23	-	-	-	-	1	23
1	176	-	-	-	-	-	-	-	-	1	176
-	-	3	77	-	-	-	-	-	-	3	77
2	15	2	42	2	50	-	-	-	-	6	107
2	13	1	31	-	10	-	-	-	-	3	54
1	58	2	81	-	-	-	-	-	-	3	139
1	25	2	62	-	-	-	-	-	-	3	87
11	370	8	321	7	395	-	-	-	-	26	1,086
-	-	5	123	2	63	-	-	-	-	7	186
-	-	1	2	-	-	-	-	-	-	1	2
3	48	8	159	-	-	-	-	-	-	11	207
9	341	4	127	-	-	-	-	-	-	13	468
3	82	-	-	-	-	-	-	-	-	3	82
20	319	25	223	10	107	-	10	-	-	56	659
6	328	17	530	9	288	1	36	-	-	35	1,182
-	-	2	33	-	-	3	-	-	-	2	33
-	-	3	88	-	-	-	-	-	-	3	88
1	12	-	-	-	-	-	-	-	-	1	12
1	4	-	-	-	-	-	-	-	-	1	4

MEDICAL and Surgical Report of the Royal Marine Division at *Chatham*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number new on the List.
VIII. Diseases of the Digestive System.	Cynanche - - -	3	27	28	-	-	-	2
	Dyspepsia - - -	2	40	38	-	-	3	1
	Dysentery - - -	-	2	1	-	-	1	-
	Diarrhoea - - -	-	16	16	-	-	-	-
	Colic and Constipation - -	1	5	4	-	-	1	1
	Hæmorrhoids - - -	-	5	4	-	-	1	-
	Hernia - - -	-	5	1	-	-	4	-
	Worms - - -	1	-	-	-	-	1	-
	Fistula in Ano - - -	1	-	-	-	-	1	-
	Hepatitis - - -	1	3	3	-	-	1	-
	Condyloma Ani - - -	-	1	1	-	-	-	-
	Jaundice - - -	1	5	4	-	1	1	-
IX. and X. Diseases of the Urinary and Generative System.	Bright's Disease - - -	-	1	1	-	-	-	-
	Cystitis - - -	-	1	1	-	-	-	-
	Gonorrhœa - - -	2	96	94	-	-	-	4
	Retention of Urine - - -	-	1	1	-	-	-	-
	Stricture - - -	-	6	4	-	-	1	1
	Varicocele - - -	-	1	1	-	-	-	-
	Orethritis - - -	1	22	23	-	-	-	-
	Hydrocele - - -	-	1	1	-	-	-	-
XI. Diseases of the Organs of Locomotion.	Diseases of the Bones - -	2	2	2	-	-	2	-
	Diseases of the Joints - -	1	5	3	-	-	3	-
	Diseases of the Bursæ - -	-	1	1	-	-	-	-
XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.	Urticaria - - -	-	2	2	-	-	-	-
	Phlegmon and Abscess - -	4	56	60	-	-	-	-
	Ulcer - - -	3	27	25	-	-	3	2
	Impetigo - - -	-	2	2	-	-	-	-
	Eczema - - -	-	5	4	-	-	1	-
	Leprosy - - -	-	1	1	-	-	-	-
	Scabies - - -	-	18	18	-	-	-	-
	Tumour - - -	-	2	2	-	-	-	-
	Psoriasis - - -	-	3	3	-	-	-	-
	Herpes - - -	-	2	2	-	-	-	-
Unclassed - - -	Corn - - -	-	1	1	-	-	-	-
	Debility - - -	-	8	3	-	-	5	-
Wounds and Injuries -	Delirium Tremens - - -	-	2	1	-	-	-	1
	Wounds - - -	2	18	19	-	-	1	-
	Fractures - - -	-	6	3	-	-	3	-
	Dislocations - - -	-	1	1	-	-	-	-
	Sprains - - -	-	24	24	-	-	-	-
	Contusions - - -	2	43	40	-	-	2	3
	Burns and Scalds - - -	1	1	2	-	-	-	-
	Poisoning - - -	-	1	1	-	-	-	-
TOTALS - - -		62	911	894	1	9	123	36

between the 1st of January and the 31st of December 1869—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
17	252	9	109	1	5	-	-	-	-	27	366
11	187	24	537	5	124	-	-	-	-	40	848
-	-	1	21	1	62	-	-	-	-	2	83
7	73	7	37	1	7	1	13	-	-	16	130
2	8	3	46	-	-	-	-	-	-	5	49
1	10	3	89	1	12	-	-	-	-	5	111
1	4	3	44	1	18	-	-	-	-	5	66
-	101	-	-	-	-	-	-	-	-	-	101
-	-	-	117	-	-	-	-	-	-	-	117
-	-	3	205	-	-	-	-	-	-	3	205
1	37	-	-	-	-	-	-	-	-	1	37
3	55	2	122	-	-	-	-	-	-	5	177
-	-	1	40	-	-	-	-	-	-	1	40
1	66	-	-	-	-	-	-	-	-	1	66
69	1,693	26	889	1	30	-	-	-	-	96	2,562
-	-	1	3	-	-	-	-	-	-	1	3
1	73	5	288	-	-	-	-	-	-	6	361
-	-	1	107	-	-	-	-	-	-	1	107
5	89	15	552	2	136	-	-	-	-	22	777
-	-	1	9	-	-	-	-	-	-	1	9
1	173	1	11	-	-	-	-	-	-	2	184
2	96	3	108	-	-	-	-	-	-	5	204
1	8	-	-	-	-	-	-	-	-	1	8
-	-	2	12	-	-	-	-	-	-	2	12
28	469	24	458	4	110	-	-	-	-	56	1,037
12	251	10	364	5	220	-	-	-	-	27	835
2	247	-	-	-	-	-	-	-	-	2	247
1	41	2	101	2	225	-	-	-	-	5	367
1	14	-	-	-	-	-	-	-	-	1	14
13	179	5	63	-	-	-	-	-	-	18	242
2	43	-	-	-	-	-	-	-	-	2	43
3	53	-	-	-	-	-	-	-	-	3	53
1	5	1	8	-	-	-	-	-	-	2	13
1	4	-	-	-	-	-	-	-	-	1	4
4	128	2	83	1	7	1	5	-	-	8	223
-	-	-	-	2	13	-	-	-	-	2	13
10	141	5	53	3	50	-	-	-	-	18	244
1	13	4	45	1	116	-	-	-	-	6	174
-	-	1	11	-	-	-	-	-	-	1	11
10	76	13	217	1	7	-	-	-	-	24	300
15	140	26	413	2	25	-	-	-	-	43	578
1	9	-	3	-	-	-	-	-	-	1	12
1	2	-	-	-	-	-	-	-	-	1	2
420	11,767	391	10,737	98	3,037	7	68	-	-	911	25,609

REPORT ON THE HEALTH
OF THE
ROYAL MARINE LIGHT INFANTRY DIVISION, CHATHAM,
For the Year 1869,
 BY
DEPUTY INSPECTOR GENERAL H. J. DOMVILLE, C.B., M.D.

Appendix.

THERE were no special causes injuriously affecting the general health and sanitary condition of the men of this division during this year.

No epidemic occurred, and, with the exception of a few sporadic cases of scarlet fever, there was a marked absence of zymotic disease.

The Royal Marine Barracks are healthily situated on a steep incline towards the River Medway, from which it is separated by a broad quay. The buildings are capable of accommodating about 1,500 men, and there are, besides the men's quarters, numerous other buildings devoted to stores, recreation-rooms, staff quarters, &c.

The barrack-rooms are well warmed and ventilated, and there are no sinks or communication with drainage within the buildings where the men are quartered. Each man is allowed 600 cubic feet of space, and the number of men in each room is regulated by its capacity in this respect.

The water supply of the barracks is ample and good; it is derived from two deep wells in the dockyard, whence it is pumped by steam-power into cisterns on the top of the barracks. This water is very hard, but possesses all the properties of spring water derived from a chalky soil.

The sewerage consists of a large main drain, which runs under the centre of the parade ground and barrack buildings into the river. This drain, which is built of brick and is very capacious, commences in the barracks of the dépôt battalion on the side of the hill above the marine barracks and higher up the incline. Although it thus conveys the sewerage of the former barracks through the latter, no bad smells are perceived, the openings into it being well covered. It receives the various pipes from the lavatories, latrines, &c., as it passes through the Royal Marine Barracks, all of which are well trapped. The main sewer is flushed twice a month.

Except in the matter of baths, the ablution accommodation is good. The lavatories, which are close to the quarters, contain 92 basins, with suitable taps and plugs constantly supplied with water. There are two baths, but there are no means of supplying them with hot water.

The latrines, 38 in number, are on Macfarlane's principle; they work well, and are kept quite free from smell, being flushed three times a day. The number of urinals near each latrine is sufficient.

There being no urinals inside the men's quarters, a large tub is placed in each barrack-room every night, and removed to a suitable place every morning. This plan is much better than obliging the men to go out in the night to the regular urinals.

The men sleep on mattresses stuffed with straw, which is changed every three months, and they sleep in sheets which are changed once a month.

The arrangements for cooking are ample, there being a large bakehouse and a cook-house, so that the men can prepare their food as they like. They mess in their barrack-rooms, and complete arrangements are made for removing debris of every kind.

There is a recreation-room for the privates, with bagatelle boards and other amusements, and attached to this is a capital library and reading-room. The non-commissioned officers have all these privileges on a higher scale.

The

The canteen is open from 10 a.m. to 9 p.m., but no spirits are sold. Ordinary sound beer and porter, and all articles of grocery, are retailed.

The men's rations are good, and they cannot be otherwise, considering the surveillance maintained over them.

The punishment cells are clean, well ventilated, and warm, and when occupied they are visited by a medical officer of the division every day.

The accommodation for married men is certainly not satisfactory. Their quarters are situated mostly in the attics, where the heat in summer and cold in winter are felt intensely, and the chimneys smoke almost without exception. Each married man in barracks (who is generally a non-commissioned officer) has two small rooms, and the average number composing each family is five; the space is totally insufficient.

Some of the married men are allowed a spare barrack-room each for themselves and their families, and in these the space is ample, and they are very comfortable, but they hold them only on sufferance, and are liable to be taken from them as often as the number of men at head quarters increases.

Except in the staff sergeants' married quarters, there are no waterclosets for the use of women and children. A few latrines are set apart for their use outside the buildings, and to these they must resort at all hours. The majority of the married men, about 240, live outside in the town, and as a rule their dwellings are in the most wretched and unhealthy parts. They are visited once a week by an officer, who reports that the quarters occupied are clean.

On the whole the general hygienic condition of the barracks may be considered satisfactory and the means adopted for maintaining the sanitary and moral condition of the men as favourable as can be well desired under the circumstances in which they are placed.

The mean daily strength at head quarters of all ranks for the year was 1,500. In estimating the ratio of disease it should be stated that the number of men present fluctuates rapidly, 1,061 having disembarked from the Fleet or joined the division from other sources, while about the same number were embarked or left it on detached duty; the in-coming detachments always bringing a certain proportion of weak and sickly men, whereas none but strong and healthy men are allowed to embark, all detachments being subjected to a careful physical examination prior to embarkation.

Besides the strength at head quarters, there were 1,696 men serving in the Fleet in all quarters of the globe, and on an average for the year, about 500 men belonging to the recruiting dépôt at Deal, raising the total of the mean strength to 3,696.

All marines suffering from climatic or other diseases rendering them unfit for sea service, are sent to the head quarters hospital, either for treatment or to be surveyed before being finally pronounced unfit for further service.

The Deal dépôt also contributes largely to the sick-list for similar reasons, and it is frequently in the early stages of a soldier's career, that any physical defects which had been inappreciable or overlooked at his enlistment are developed upon the drill ground or in the gymnasium.

In estimating the ratio of invaliding it is therefore necessary to take into consideration the full strength of the division, and, to form a correct estimate of the ratio of deaths, it is necessary to add the number of deaths occurring away from the division to those which took place in the hospital. The number of deaths occurring away from head quarters was fifteen, but the causes of death are not reported, and as the majority of these occurred in ships on foreign stations, they would be included in other returns.

Total Mean Strength of Division.	Total Invalided.	Total Number of Deaths.	Ratio per 1,000 Invalided.	Ratio per 1,000 Deaths.
3,696	123	24	33.27	6.49

The following is a summary of the principal diseases that were admitted, which is also explanatory of the chief causes of Death and Invaliding enumerated in

Appendix. the Nosological Table. Other cases of importance or peculiar interest are noted in the Returns for Melville Hospital :—

GENERAL DISEASES (Sect. A.)

Scarlatina.—Only two cases were admitted to hospital, and they occurred independently of each other, the one in February and the other in August.

Enteric Fever.—The only case that is entered under this head, and which terminated fatally after ninety-seven days' illness, was complicated with a large abscess of the liver and tubercular disease of the lungs.

Ague.—This disease is not epidemic, except very rarely; six cases were put on the list, and the origin of the disease in all of them could be traced to the patients having been recently at Sheerness or at Gravesend, to which latter place all the men of the division go in their turn for about a month, during the summer, for rifle practice, the ranges for which are situated in the marshes.

Mumps.—Of the three cases put on the list one was sixty-eight days under treatment, the disease having proceeded to suppuration.

Erysipelas.—There were two cases of a mild character, occurring, the one in January and the other in December, both attributable to cold.

GENERAL DISEASES (Sect. B.)

Rheumatism.—No fewer than sixty-five cases of this disease were admitted during the year; of these, nine cases were re-admissions. There were thirty-four cases of the chronic or muscular form; six were cases of acute arthritis, and eight were traceable either to a recent attack of gonorrhœa or had a previous history of syphilitic infection. One case admitted as rheumatism was invalided for morbus coxæ. Five cases had been previously invalided from Foreign stations for the same disease; three were received from Deal and three from ships.

Gout.—Two cases only; occurring respectively in an officer and a serjeant.

Syphilis.—There were 111 cases of the primary form of this disease in this year, being a considerable diminution in the number of admissions since the Contagious Diseases Act came into force.

In 1865 the number of admissions was 284 out of a mean strength of 1,523, showing a ratio of 8 per cent. for this year against 18.5 per cent. in 1865.

Of the secondary forms of this disease there were twenty-three cases this year against seventy-one in 1865.

Of gonorrhœa there were ninety-six cases against 104 in 1865, showing little diminution of this form of venereal disease since the operation of the Act.

Of the above diseases, out of 200 cases of primary syphilis and gonorrhœa, only 111 were declared to have been contracted in the district.

The average number of days during which these diseases were under treatment was, respectively—

Primary syphilis	-	-	-	-	-	43 days.
Secondary „	-	-	-	-	-	30 „
Gonorrhœa	-	-	-	-	-	29 „

The average number of men daily under treatment was twenty-two, equal to a loss by sickness of six and a half days of the mean strength of the whole division at head quarters.

Cancer.—One case of epithelioma of the lip, removed by operation. The patient was invalided in consequence of the deformity and general cachexia.

Phthisis.—Twenty cases were admitted: of these the majority were found unfit for service, and were invalided or died. Three cases recovered sufficiently to be able to return to duty, but, in one instance, only for a few weeks.

DISEASES OF THE NERVOUS SYSTEM, &c.

Sunstroke.—A single case occurred in July, and was attended with no subsequent ill effects, the patient being able to return to his duty two days afterwards.

Vertigo.

Vertigo.—One case invalided; the giddiness being persistent, and probably symptomatic of incipient softening of the brain.

Epilepsy.—Five cases appear on the report, of which one was sent to duty after having been detained eight days for observation, but he returned with the same complaint, and was subsequently invalided.

Dementia.—Four cases admitted; two of whom, after being kept for observation, were discharged to duty, one sent to Yarmouth, and one invalided for weak intellect.

Visus Brevior.—Under this head are included the cases of three men whose defect of vision was first observed while they were at rifle instruction, when they were found to be unable to see the marks to be aimed at, and were therefore considered unfit for service.

The ophthalmoscope revealed no lesion in any of these cases; one, in which the defect was associated with palpitation, had also incipient tubercular disease, and in the other two it was combined with palpitation and dyspepsia.

DISEASES OF THE CIRCULATORY SYSTEM.

Diseases of the Heart.—These have furnished a large but not unusual quota to the list of invalids. The eight cases of organic disease could in most instances be traced to previous attacks of rheumatism. The autopsy in the single death in hospital from this disease revealed immense hypertrophy, with rupture of one of the semilunar valves.

Of twenty-eight cases of functional disease, fifteen were discharged to duty, and thirteen found unfit for service, the latter being for the most part young lads who, from constitutional weakness, were unable to bear the strain produced upon the system by the weight of the knapsack and other accoutrements under the exertion required at running drill.

Pericarditis.—This case occurred in a married man living at his own home, and was in an advanced stage when admitted, effusion having already taken place. He died on the second day after his admission. The autopsy revealed a great amount of disease, there being, besides the pericardial effusion, great hypertrophy and partial adhesion. The large vessels were also obstructed by large plugs of fibrine, extending from the heart far into the aorta and its primary branches.

Varicose Veins.—Eight persons were found unfit for further service from this cause, being for the most part men with from twelve to fifteen years' service and about thirty years of age.

DISEASES OF THE RESPIRATORY SYSTEM.

One hundred and three cases were admitted to hospital; of these two were invalided for aphonia, four for chronic bronchitis, and one for asthma. There were two deaths; one from asthma complicated with bronchitis, the patient having been long and frequently under treatment, and one death from pneumonia, after fourteen days' illness.

DISEASES OF THE DIGESTIVE ORGANS.

Under this head 109 cases were admitted to hospital, fourteen of which were invalided as specified in the Tabular Report. One case of worms remaining from the previous Return, was invalided in April for debility dependent on chronic disease of the stomach.

Dyspepsia.—Under this comprehensive term are placed cases varying in character and intensity, from the most distressing irritability of the stomach, with constant vomiting and gastralgia, to those simple forms of temporary indigestion, the result of a slight indiscretion of diet; and it also includes those cases of incapacity from duty which were the result of intemperance, and many of which approached the confines of delirium tremens.

Three cases were found unfit for further service, the disease being complicated in one with palpitation, and in the others with chronic gastritis and general debility.

Appendix.

Dysentery.—The two cases of this disease were both foreign invalids, and one was subsequently found unfit for further service.

Colic and Constipation.—One case of painter's colic remained from last Return and was discharged invalided with paralysis of both wrists after being 108 days in hospital; five other cases were admitted.

Hepatitis.—Of the three cases of this disease admitted, one had been invalided from a foreign station, and on being re-surveyed after protracted hospital treatment, was discharged invalided.

Jaundice.—Five cases of this disease were put on the sick-list, one of which proved fatal on the 14th day after admission, in a man who had been in hospital during the previous year for the same complaint.

DISEASES of the URINARY and GENERATIVE SYSTEM.

Remarks on gonorrhoea are given under venereal diseases.

DISEASES of the CELLULAR TISSUE, &c.

Of these diseases there were admitted to hospital 119 cases. Many sores of very trifling importance, small boils and slight abrasions, which had degenerated into an ulcerated state, and cases of itch, to be accounted for by the habits of those affected, constituted the majority. Three cases of ulcer, however, were invalided, one of whom had been 146 days under treatment, another had rodent ulcer of the mouth, and the third was connected with extensive varicose veins.

DISEASES UNCLASSED.

Debility.—Of eight cases which were admitted under this head, five were invalided. In the first case, that of a drummer of seventeen, it was connected with undeveloped tubercular disease; in the second case, also a drummer of sixteen, there was general want of muscular development and shortness of breath; the third case was a private of forty, of dissipated habits, removed from his employment in the tailors' shop for misconduct, and found unfit for the ranks, with no other appreciable disease; the fourth case, a private of 19, had been under treatment for rheumatism seventy-nine days, and after fourteen days at light duty returned with no appreciable disease, but having apparently outgrown his strength; the fifth case was a private of thirty-four, the result of dysentery and hepatic disease contracted in the Red Sea.

Delirium Tremens.—There were only two decided cases of this disease; in one the patient had taken to drink in consequence of domestic troubles, and the other was that of a man recently paid off from a ship.

Wounds and Injuries.—Of these there remained and were put on the sick-list ninety-nine cases, of which six were invalided.

1st case. Invalided for ankylosis of finger, the result of an accident on board Her Majesty's Ship Minotaur.

2nd case. For deformity of left ankle, from fracture occurring three years previously in Woolwich Dockyard.

3rd case. For lameness, the result of fracture of the leg occurring in a public-house in Chatham.

4th case. For lameness, following fracture of the leg close to the ankle joint, at Gibraltar.

5th case. Had been invalided from Her Majesty's ship Cameleon, for contusion of the knee, resulting in chronic arthritis.

6th case. Was invalided for the result of injuries received by a fall into a trench, caused by the breaking down of a temporary bridge.

MEDICAL AND SURGICAL REPORTS,
For the Year 1869,
OF
HER MAJESTY'S DOCKYARDS
AT
SHEERNESS, DEVONPORT,
CHATHAM, KEYHAM, and
PORTSMOUTH, PEMBROKE.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, SHEERNESS,
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
STAFF SURGEON CHARLES FORBES, M.D.

MEDICAL and SURGICAL REPORT of Her Majesty's Dockyard, *Sheerness*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	-	2	1	-	-	-	1
	Typhus Fever - - -	-	1	-	-	-	-	1
	Simple Continued Fever -	1	2	3	-	-	-	-
	Ague - - - -	4	189	190	-	-	-	3
	Erysipelas - - -	-	3	1	1	-	-	1
II. General Diseases, Section B.	Rheumatism - - -	3	41	41	-	1	1	1
	Phthisis Pulmonalis -	1	9	2	-	5	1	2
	Hæmoptysis - - -	-	10	5	1	4	-	-
III. Diseases of the Nervous System and Organs of the Special Senses.	Epilepsy - - -	-	1	1	-	-	-	-
	Neuralgia - - -	-	1	1	-	-	-	-
	Insanity - - -	-	3	-	-	2	-	1
	Ophthalmia - - -	1	1	2	-	-	-	-
IV. Diseases of the Circulatory System.	Diseases of the Heart:							
	Functional - - -	1	-	-	-	-	1	-
	Organic - - -	-	1	-	-	-	-	1
V. & VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - - -	-	1	1	-	-	-	-
VII. Diseases of the Respiratory System.	Catarrh - - -	2	133	129	-	-	-	6
	Bronchitis - - -	1	33	30	-	-	1	3
	Pneumonia - - -	-	6	2	-	2	1	1
	Pleurisy - - -	-	2	1	-	-	-	1

between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases, excluding those remaining by first Column.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
-	-	-	-	-	-	-	-	-	-	2	37
-	-	-	-	-	-	-	-	-	-	1	19
-	-	-	-	-	-	-	-	-	-	2	17
-	-	-	-	-	-	-	-	-	-	189	2,223
-	-	-	-	-	-	-	-	-	-	3	134
-	-	-	-	-	-	-	-	-	-	41	547
-	-	-	-	-	-	-	-	-	-	9	590
-	-	-	-	-	-	-	-	-	-	10	261
-	-	-	-	-	-	-	-	-	-	1	10
-	-	-	-	-	-	-	-	-	-	1	4
-	-	-	-	-	-	-	-	-	-	3	277
-	-	-	-	-	-	-	-	-	-	1	17
-	-	-	-	-	-	-	-	-	-	-	56
-	-	-	-	-	-	-	-	-	-	1	25
-	-	-	-	-	-	-	-	-	-	1	10
-	-	-	-	-	-	-	-	-	-	133	792
-	-	-	-	-	-	-	-	-	-	33	199
-	-	-	-	-	-	-	-	-	-	6	189
-	-	-	-	-	-	-	-	-	-	2	107

MEDICAL and Surgical Report of Her Majesty's Dockyard, *Sheerness*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
VIII. Diseases of the Digestive System.	Cynanche - - -	1	62	61	-	-	1	1
	Dyspepsia - - -	-	20	18	-	-	-	2
	Dysentery - - -	1	2	3	-	-	-	-
	Diarrhoea - - -	-	53	51	-	-	-	2
	Colic and Constipation - -	-	8	8	-	-	-	-
	Hæmorrhoids - - -	-	7	6	-	-	-	1
	Hepatitis - - -	-	1	1	-	-	-	-
	Jaundice - - -	-	1	-	-	-	-	1
IX. & X. Diseases of the Urinary and Generative Systems.	Hydrocele - - -	-	1	1	-	-	-	-
	Anasarca - - -	-	1	1	-	-	-	-
	Orchitis - - -	-	1	1	-	-	-	-
XI. Diseases of the Organs of Locomotion.	Diseases of the Joints -	1	-	1	-	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess - -	-	49	46	-	1	-	2
	Ulcer - - -	-	3	3	-	-	-	-
	Fistula - - -	-	2	1	-	-	-	1
	Psoriasis - - -	-	2	2	-	-	-	-
Unclassed - - -	Debility - - -	-	8	7	-	1	-	-
Wounds and Injuries -	Wounds - - -	4	152	145	4	-	-	7
	Fractures - - -	1	7	6	1	-	-	1
	Sprains - - -	2	92	84	3	-	1	6
	Contusions - - -	3	191	185	1	-	2	6
	Burns and Scalds - -	1	24	17	5	4	1	2
	Abrasions - - -	2	22	24	-	-	-	-
TOTALS - - -		30	1,148	1,082	16	20	10	54

Number of all Ranks and Ratings during the period for which this Return is rendered:

Officers of the Yard - - - - - 70
Established, &c., Hired Men - - - - - 1,900

Total - - - 1,970

between the 1st of January and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases, excluding those remaining by first Column.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
-	-	-	-	-	-	-	-	-	-	62	448
-	-	-	-	-	-	-	-	-	-	20	139
-	-	-	-	-	-	-	-	-	-	2	119
-	-	-	-	-	-	-	-	-	-	53	316
-	-	-	-	-	-	-	-	-	-	8	151
-	-	-	-	-	-	-	-	-	-	7	274
-	-	-	-	-	-	-	-	-	-	1	13
-	-	-	-	-	-	-	-	-	-	1	4
-	-	-	-	-	-	-	-	-	-	1	19
-	-	-	-	-	-	-	-	-	-	1	10
-	-	-	-	-	-	-	-	-	-	1	13
-	-	-	-	-	-	-	-	-	-	-	35
-	-	-	-	-	-	-	-	-	-	49	453
-	-	-	-	-	-	-	-	-	-	3	174
-	-	-	-	-	-	-	-	-	-	2	14
-	-	-	-	-	-	-	-	-	-	2	75
-	-	-	-	-	-	-	-	-	-	8	115
-	-	-	-	-	-	-	-	-	-	152	2,467
-	-	-	-	-	-	-	-	-	-	7	565
-	-	-	-	-	-	-	-	-	-	92	1,551
-	-	-	-	-	-	-	-	-	-	191	2,345
-	-	-	-	-	-	-	-	-	-	24	328
-	-	-	-	-	-	-	-	-	-	22	276
-	-	-	-	-	-	-	-	-	-	1,148	15,818

MEDICAL AND SURGICAL REPORT

OF

HER MAJESTY'S DOCKYARD, SHEERNESS,

For the Year 1869,

By Staff Surgeon CHARLES FORBES, M.D.

GENERAL REMARKS.

Appendix.

HER Majesty's Dockyard at Sheerness is situated at the north-western extremity of the Isle of Sheppy, facing the estuaries of the Rivers Thames and Medway. Its position, as commanding the entrances to these rivers, and the facilities afforded for fitting out and re-fitting ships, especially the North Sea fleets, have for over two centuries made this dockyard an establishment of great national importance, although in extent of area, or in the number of persons employed, it cannot vie with Portsmouth, Plymouth, or Chatham yards.

Since the early part of this century, however, a great development of the resources of the yard has taken place, owing to the changes and progressive exigencies of the Public Service. The introduction of copper sheathing at one period, then the application of steam-power at another, and finally, the requirements of an iron-clad fleet, have necessitated the establishment of a factory and workshops, and the employment of skilled mechanics and artisans of various trades.

In the year 1806, the then existing dockyard was of very limited extent, the number of persons employed averaging only about 650, while in the year 1869 the numbers averaged 1,970, while the area and capabilities of the yard had been increased in still greater relative proportions, official residences, terraces, factories having been built, an artesian well sunk, &c. &c. &c.

The geological history of the Isle of Sheppy is very simple; being a part of the "London Basin," it belongs to the Eocene period of the older tertiaries. The "London Clay" forms the great mass of the whole, and is richly fossiliferous, abounding in organic remains, both vegetable and animal, characteristic of the period; fossil fruits specially abound. The cliffs on the north-eastern sea face are capped by outlayers of siliceous sand. These cliffs are being rapidly worn away by the action of the sea, landslips are frequent, and it is evident, on the most cursory glance, that at one time, at a period, historically, not very remote, these cliffs extended nearly to, and swept round easterly by, the channel now known as the Great Nore.

To this geological formation, viz., a flat surface of retentive clay holding surface water, with no fall to render subsoil drainage possible, and to the town and dockyard being placed at the mouths of two tidal estuaries, are due the special influences, which, as malarious poison, develop certain forms of disease amongst the population.

Sheerness is situated in the parish of Minster, and is divided into three sections, viz., Blue town, Mile town, and Marine town. The first of these is the most ancient, and stretches along the southern wall of the dockyard. Mile town stretches easterly, and, at an acute angle to the left; the newer buildings of Marine town stretch along the sea wall facing due north, the terraces following the line of the sea beach.

As a rule, the houses are small, ill ventilated, and incommodious, in many parts ranging along narrow alleys not more than three or four feet wide. There are many cesspools, and no drainage; "latrines," simply abominable, are cleared out from time to time by nightmen, to the intolerable nuisance of the whole

whole neighbourhood. The water supply is good; a company working an artesian well meets all the wants of the community.

Two of these wells are at work in the dockyard, and give an ample supply for all purposes. In each case the water fails to reach the surface, but rising to a certain height, it is then pumped up by steam-power.

The sinking of these wells has been a cause of serious injury to property in the neighbourhood. The water supply of hamlets, and detached residences, and farmhouses, formerly abundant, has been "tapped," and for miles around, the people are dependent on water supplies brought out by carts.

A semicircular sweep of flat, and, in the winter and spring, marshy land, extends with a radius of from two and a-half to three miles around the town and dockyard. The whole is intersected by deep ditches of stagnant water and in the immediate vicinity of the town there are two wide moats filled with brackish water, constructed as part of the military defences.

Now, taking into consideration all these various prolific sources of malaria viz., two tidal estuaries, marshy grass land, retentive clay soil holding surface water, stagnant moats and ditches, badly ventilated, close, confined dwellings, no drainage, numerous cesspools, &c. &c. &c., it is marvellous that so little sickness of a serious nature should exist in the district. Enteric and typhus fevers it might be thought would be endemic under such conditions, but although a few cases of the latter occurred in the year 1869, the writer has seen but one case of the former, and that was in the military hospital.

When, however, an epidemic of cholera followed by small-pox, such as ravaged the town in 1866, takes place, the disease, whichever it may be, assumes its most virulent and fatal form.

At the same time, while for several years back enjoying this immunity from either epidemic or severe endemic disease, the inhabitants suffer from a great deal of illness, varying from the "malaise" of malarious poisoning, through different degrees of intermittent fever, which frequently in the autumn culminates in severe bilious remittent.

The population of the whole Minster district, in which parish Sheerness is situated, as shown by the returns of the last Census, amounts to 15,537; of this aggregate Trinity district, that is "Sheerness," has, as its population, 13,456.

The annual death-rate is 17 per 1,000, a rate which would tend to prove a very high degree of salubrity in the climate; this, however, is but another proof how fallacious statistics may be, and for the following reasons, viz.: The inhabitants, being nearly all more or less dependent on the dockyard, form a floating, shifting population, brought together from all parts of the country. When organic disease occurs, and a fatal issue is imminent, in numerous cases the individuals leave the locality to die amongst their friends, or possibly in some metropolitan hospital.

The death-rate is in this way kept down, and though the per-centage may be statistically true, the inference is fallacious and delusive.

Meteorology.—Having thus briefly summarised the local terrestrial influences bearing on the sanitary condition of the people, a few remarks will be necessary on the climatorial agencies. Everywhere, over the whole globe, the weather for the last four years has been exceptional, and nowhere have the changes in the seasons been more felt than in the South of England, and very remarkably so in this locality. At Sheerness in 1869, a very wet, mild winter was followed by a cold, late spring, which ushered in a scorching summer, followed by a boisterous autumn and early winter. It is at the transition periods of the vernal and autumnal quarters, when, with a bright sun, a biting east wind blows, the climate may be characterised as "treacherous."

The average difference of the wet and dry bulbs for the year is about 3° Fah. It is to be remembered that the east winds which prevail in this locality have a different character from those dry bracing winds which strike on the eastern coasts direct from the surface of the ocean; instead of crossing salt water they reach this locality after crossing an expanse of brackish water, from the surface of which a very considerable degree of evaporation is constantly going on. It has been stated that of all the thousands of tons of fresh water discharged by the Thames and the Medway, scarcely a drop mingles with the ocean; floating on the surface by reason of its lesser specific gravity, it is carried backwards and forwards by the tidal wave, and is entirely carried off by evapo-

Appendix.

ration. From this it results that the prevailing easterly winds which blow over the Isle of Sheppy strike cold and chill, producing ague, rheumatism, catarrhal, and bronchial affections.

GENERAL SUMMARY of the various Forms of Disease and Injury arranged nosologically, as per Table annexed.

I. GENERAL DISEASES, SECTION A.

Scarlet Fever.—While very prevalent all over the kingdom, Sheerness for a long time enjoyed a remarkable immunity from this disease; a few sporadic cases had occurred amongst the children of the town, but of a very mild type, which, however, in the spring of 1870 became more severe, and proved fatal in many cases. In the dockyard it showed itself in the family of a resident officer; in a family of seven children two only escaped, a nursemaid being also attacked. The form of the disease was simple; there were no complications. In one instance, a boy ten years of age, the sudden appearance of the rash was remarkable; without any previous complaint, while apparently in his usual health, he became sick, vomited, and simultaneously a bright scarlet rash appeared. Carbolic acid was used freely as a disinfectant. Little or no medicine was given. Warm baths were used early and frequently, especially during the process of desquamation.

Amongst the dockyard men two cases occurred; both terminated favourably, with a total of thirty-seven days' sickness.

Typhus Fever.—One case, at the close of the year with nineteen days' sickness, terminated in recovery.

Simple Continued Fever, or Febricula.—Three cases of no moment, giving in all seventeen days' sickness.

Ague.—Of this, the most prevalent form of disease in this locality, 193 cases (four of which had been "brought up" from preceding year) have been under treatment. The medical records for some years back show that, as in the present instance, this disease reaches its maximum development in the Midsummer quarter of the year, while in the first or Lady quarter, the number of cases was only thirty-six, in the Michaelmas quarter thirty-three, and in the Christmas quarter nineteen, in the Midsummer quarter there were 101, more than all the others put together. These cases gave in the aggregate 2,223 "days' sickness." These, it must be noted, are but the severer cases, those in which men were rendered quite unfit for their work. It would be difficult to give an estimate of the numerous cases of slight attacks, and of cases of what may be called "undeveloped ague," which constantly occur, and which are relieved more or less effectually by the prompt administration of a full dose of quinine combined with diffusible stimulants.

While malarious poisoning thus prevails to a great extent amongst both old and young, infants at the breast even showing its effects, it is very seldom, at least so far as the writer's observation goes, that a case of fully developed ague running through three clearly developed stages occurs; such cases do occur, but they are exceptional. By far the greater number of cases may be classed as "irregular ague"; undeveloped or "dead ague" as it is locally termed; or it might be justly called bastard or spurious ague. There is all the languor and depression, aching of loins and limbs, shrinking of the surface, and chills; but there is no well-defined hot or sweating stage. Flushes of heat and partial bursts of perspiration do occur, but not constantly, and always irregularly. Another point of interest is the fact that as a rule the only visceral complication is in the liver. The writer has reason to believe that many cases of ague in his own practice have been cut short in their first stage by the prompt exhibition of a stimulating emetic; the disturbed balance of the portal circulation being thereby restored; and experience has shown that the best way to overcome or remove this latent malarious blood poison is to attack the hepatic circulation, so as to drain the liver. Affections of the spleen, so common in the fenny and other aguish districts, are unknown in Sheerness and its immediate locality, though at the south-eastern end of the island they are found amongst old farm labourers who have worked there from boyhood. It has been remarked that while certain newly-arrived residents quickly show the effects of malaria, others seem fortified against it; but in most instances, after a time, hepatic derangements, with intermittent febrile attacks, necessitate a change of climate.

In

In adults, ague had a general tendency to assume the quartan type; amongst children, the quotidian; but in each case more or less irregularly.

Workmen attacked with ague, and unable to continue their work, are at once passed out "sick," and are attended by private practitioners; for others who complain, at the surgery, of the disease in its lurking, undeveloped form, a full dose of quinine (ten to twelve grains dissolved in Acid. sulph. arom. with Spirit. chloroformi) is given at once, and repeated if the man complains. Quinine combined with a dose of sulphate of magnesia to act on the bowels is prescribed in most instances with the best effect.

Many useful sanitary reforms have been effected during the last few years, but the physical conformation of the locality preventing efficient drainage, the crowded narrow alleys and the general meteorological conditions make it futile to hope that malarious influences though they may be ameliorated, can be made to disappear.

Queenborough, a village two miles from Sheerness, is free from ague during the prevalence of north and north-westerly winds. It is very prevalent during easterly winds, which come sweeping over the marshes.

Erysipelas.—Three cases; one was discharged to duty; one sent to hospital; one remains. The case sent to hospital occurred in the Midsummer quarter and rhows fifty-one days' sickness. No further particulars are given in the copy of the nosological return for that period. The other cases were of a lingering nature, erythematous rather than erysipelatous, and attributable to an impoverished state of the blood.

II. GENERAL DISEASES, SECTION B.

Rheumatism.—This disease in its various forms of chronic, subacute, and acute, occurred in forty-one cases. Three were brought up from last year, the whole giving 547 days' illness. One case proved fatal in the early part of the Midsummer quarter; another case was sent to hospital; forty-one were discharged to duty. The majority of these cases occurred in the Lady and Michaelmas quarters of the year.

Phthisis Pulmonalis.—Nine cases were entered on the sick-list. One was "brought up;" two were discharged to duty; five died, and two remained. In all these cases the disease ran a rapid course; tubercular deposits in the upper lobes of the lungs lying dormant apparently, were suddenly roused into activity, and soon carried the patients off.

Hæmoptysis.—Ten cases, all, with one exception, depending on disease of the lungs; which, during the period of this Report, has been fatally developed in nearly all. The exceptional case, was that of a powerful, healthy, young man, a shipwright, who in a hot close summer afternoon had been engaged at work with a heavy maul, striking upwards for some hours. The succussion caused rupture of some of the smaller vessels of the parenchyma of the lung; and during the night he was attacked with a slow but continuous hæmorrhage. He was sent to Melville Hospital, where he eventually made a good recovery.

In reference to these two diseases last referred to, which in the great majority of instances stand in the relation to each other of cause and effect, it may be remarked, that although they did not occur exclusively amongst the shipwrights, a great proportion did so; and it may be questioned whether the exposure of these men during the winter and spring months, while working on wet decks, on stages alongside ships at anchor in the stream, and in cold wet docks, for many hours together, may not have a tendency to develop lung disease "de novo," as it most certainly would should there be already any latent tendency thereto.

III. DISEASES OF THE NERVOUS SYSTEM AND ORGANS OF THE SPECIAL SENSES.

Epilepsy.—One slight case, and one case of neuralgia, also slight; both went to duty, after a total of fourteen days' sickness.

Insanity.—Three cases; two were sent to the county lunatic asylum and died there; one case remains. Little of any moment or interest can be said of these cases; the exciting causes were obscure, and the disease was probably hereditary

Ophthalmia.—Two

Appendix.

Ophthalmia.—Two cases of simple conjunctivitis, from dust blown accidentally into the eye, were treated ; seventeen days' sickness.

IV. DISEASES OF THE CIRCULATORY SYSTEM.

Two cases of heart disease ; one was functional, the other organic. The former, after being forty-six days on the sick-list, was superannuated. The latter, an old worn-out labourer, remains on the list, to be brought forward for survey.

V. & VI. DISEASES OF THE ABSORBENT SYSTEM AND DUCTLESS GLANDS.

Bubo (Symp.).—One case ; he was discharged to duty, after being ten days on the sick-list.

VII. DISEASES OF THE RESPIRATORY SYSTEM.

Catarrh.—One hundred and thirty-five cases were entered on the sick-list ; two of which were brought up, six remain ; the whole giving 792 days' sickness. These attacks are to be ascribed to the special climatorial influences already described ; the great majority of the cases occurred in the first and last quarters of the year.

Bronchitis, due to the same influences, occurred in thirty-three cases, one in addition being brought up ; amounting in the aggregate to 599 days' sickness. One case invalided ; three remaining ; the rest to duty.

Pneumonia.—Six cases ; two to duty ; two dead ; one invalided ; one remaining ; 189 days' sickness ; the fatal cases ran a rapid course.

Pleurisy.—Two cases, like the former, of the usual ordinary character needing no special comment further than that, all occurring during the trying weather of the spring and winter seasons, it may be presumed that exposure thereto was the exciting cause.

VIII. DISEASES OF THE DIGESTIVE SYSTEM.

Cynanche.—Sixty-two cases, occurring principally in the autumnal and winter seasons.

Dyspepsia.—Twenty cases of a form of derangement of health, difficult to classify with precision ; they were marked by febrile disturbance, anorexia, nausea, distension of the stomach, flatulence, and white-coated tongue ; from this form of disease there was an aggregate of 139 days' sickness.

Dysentery and Diarrhoea.—The former was, apparently, an aggravated form of the latter, since there is no record of anything specific in the symptoms observed. The cases of diarrhoea prevailed chiefly in the Michaelmas quarter, when it usually shows itself to a considerable extent in the yard, the workmen coming in numbers during the working hours, and applying for relief at the surgery, which in most instances readily followed the administration of a stimulating astringent draught. These fifty-five cases, conjointly, gave 435 days' sickness.

Colic and Constipation, eight cases. *Hæmorrhoids*, seven cases ; all more or less due apparently to obstruction and derangement of the portal system. These cases gave, in the aggregate, 425 days' sickness.

Hepatitis, one case. *Jaundice*, one case, slight ; arising from the same causes as the preceding. They need no comment ; both were discharged to duty ; twenty-nine days' sickness.

IX. & X. DISEASES OF THE URINARY AND GENERATIVE SYSTEMS.

Hydrocele.—A chronic case was nineteen days on the sick-list ; ——— and a slight case of *anasarca* of the lower limbs, due apparently to exposure to cold, gave ten days' sickness.

Orchitis.—One case, caused, it was stated, by a sprain, but a gleet discharge suggested another origin ; thirteen days on the sick-list.

XI. DISEASES OF THE ORGANS OF LOCOMOTION.

One case of *Diseases of the Joints*, classed as "Synovitis," has been "brought up" from the former year after sixty-six days' sickness ; no record of its nature exists ; in this present year, 1869, there was a further period of thirty-five days' sickness before being discharged to duty.

XII. & XIII. DISEASES OF THE CELLULAR TISSUE AND CUTANEOUS SYSTEM.

Phlegmon and Abscess.—Forty-nine cases; all of the ordinary character except one, which proved to be carbuncle, and terminated fatally; two were carried on, the rest being discharged to duty; the whole produced 453 days' sickness.

Ulcer.—Three cases, all to duty; 174 days' sickness. Unless it can be shown that the ulceration is due to a casualty while at work, these cases are treated by private practitioners.

Fistula in Ano.—Two cases; one to duty; one remains.

Psoriasis.—Two cases; both to duty.

DISEASES (UNCLASSED.)

Debility.—Eight cases, occurring in worn-out old men, labourers; one man died; he simply "sank" without any special symptoms.

It may be here remarked, that dockyard men labouring under any of the various forms of disease above described, are at once entered on the sick-list, "passed out," and treated by private practitioners, unless when any such disease may supervene on an injury for which they may be at the time on the hurt-list. The great majority belong to benefit clubs and societies which provide medical attendance.

WOUNDS AND INJURIES.

In reference to these accidents, the rule enforced is, that all men who during work may receive either, shall at once report himself at the surgery, when their nature and particulars are entered in the casual accident book; failing to do this, he forfeits all right to surgical aid or treatment, should ulterior bad consequences follow. The aggregate number so reporting themselves for the year 1869 was 890.

Of these, 152 have been entered on the hurt-list as wounds, besides four "brought up" from the preceding year; 145 were discharged to duty; four sent to hospital, and seven "remain," giving a total of 2,467 days' sickness.

In the spring quarter of the year four cases were sent to Melville Hospital, one being a shipwright, who received a wound of the eye from a splinter, by which the power of vision has been permanently impaired. Another man, a labourer, sustained a deep wound below the calf of the leg, with fracture of the fibula, from the sharp corner of an iron plate which fell upon him. A case of sprain, received while lifting a heavy plank, in which the psoas and iliacus externus muscles were injured; and a case of "contusion," of the nature of which there is no record.

In the midsummer quarter only two accidents of a serious nature occurred; one, in which erysipelas supervened on a slight injury of the right hand, was at once sent to Melville Hospital, where amputation of the right arm was subsequently performed, death ensuing. The other case was that of a shipwright who sustained a simple fracture of the right tibia and fibula. The man was removed to the Military Hospital, where the cure was completed. In Michaelmas quarter one case of lacerated wound of the right hand was sent to Melville Hospital, phlegmonous erysipelas extending above the elbow having supervened. Numerous abscesses formed around the wrist and elbow joints, and the man was in great danger of losing the limb, but he eventually made a fair recovery, with a stiff wrist-joint and fingers.

In the Christmas quarter there was only one case of sufficient importance to require notice. A rigger in the yard while at work received a severe contusion in the side, with shock to the system, by falling from a considerable height into the dock. He was sent to the Military Hospital, where he made a good recovery.

The cases of slight wounds and injuries that continually present themselves at the surgery are multifarious; fragments and spiculae of metal fixed in the cornea; abrasions and slight wounds of the hands and fingers; abrasions and wounds, chiefly from the adze, of the shins and feet. These adze wounds, however slight, and they have been all slight, are sometimes difficult to heal; it may be that the periosteum being abraded, prevents healing by the first intention. Carbolic acid dressing was used with excellent effect in most cases.

Fractures.—Seven cases were added, and one brought up. With the exception of the two described above, these need no special comment, being all trivial, and connected with contused wounds of the hands, chiefly of the fingers.

Appendix.

Sprains have been already alluded to under the special heading in which they are classed. There were in all ninety-two cases, giving 1,551 days' sickness.

Contusions occurred in 191 cases; one case " (an engine driver) was sent to Melville Hospital in Lady quarter of the year. The particulars are not recorded. Two cases were brought forward for survey, and invalided. The whole gave 2,345 days' sickness."

Burns and Scalds.—Twenty-four cases entered on hurt-list; one brought up; seventeen discharged to duty; five sent to hospital; four "dead"; one invalided; two remain.

The majority of these cases were of a trivial nature, but on the afternoon of 3rd November, many suffered on board Her Majesty's ship *Thistle*, the steam boiler of which vessel exploded when at the last run, on her trial trip at the measured mile. It appears that the water got too low in the boiler, which became red hot; on the sudden admission of water to supply the deficiency, steam at a very high temperature was instantaneously generated, the expansive force of which bursting the boiler, carried death and destruction around. The engineer in charge, with his assistants and others, who were close to the flues, appeared to have died in an instant, and at one and the same moment. Enveloped as they were in an atmosphere of very highly heated steam, rushing past them with fearful force, they presented all the appearances of having died from spasm of the glottis. Firemen and stokers, who were farther off, escaped the immediate consequences which had proved fatal to the others, but they sustained severe scalds, in some cases of the whole body, the cuticle being completely removed. The injury received was a question of degree in proportion to proximity or distance from the shattered boiler. Death occurred in its immediate neighbourhood; while at the distance of a few yards, the superheated steam being partially condensed, and assuming the character of watery vapour, inflicted most severe injuries, proving fatal in three cases after removal to the Military Hospital.

There were in all, fifteen killed and scalded; seven of these belonged to the dockyard; a factory draughtsman was slightly scalded on the hands; a leading man of fitting was very severely scalded; a chief stoker was killed on the spot; three engineer students, two severely and extensively injured, both of whom died in hospital; and a stoker, who also died in the Military Hospital, severely scalded about the mouth and throat, the steam having apparently been forced down the bronchial tubes. The sufferers were all landed, and in bed by 8 p. m., some in the sick bay of the Royal Naval Barracks, others in the Military Hospital, where the greatest care and attention was paid them.

Brandy and opium were given in full and repeated doses; the abraded surfaces were covered up as quickly as possible with sheets of cotton wool. The shock to the system was in all cases very great.

Such cases as survived were removed on the following day to Melville Hospital, where all made a better recovery than could have been hoped for. No death ensued. Contractions of the hands and fingers, preventing work, have been the most troublesome, and the only serious result.

There were twenty-two cases of slight abrasions, generally classed as wounds; these cases were so trivial as to need no comment.

The foregoing is a brief summary of the diseases which have shown themselves, and of the accidents which have happened in Sheerness Dockyard in the year 1869. With the exception of the loss of life and injuries sustained through the steam boiler explosion above described, it will be observed that there was a remarkable immunity from serious accidents.

Such cases as were of any importance have been described under their respective headings. There is nothing of such special interest in the surgical records of the year as to require fuller detail. This freedom from serious or fatal accidents among so many (1,900) men, engaged daily in various trades and occupations amongst machinery, and lethal weapons of all kinds, is certainly very remarkable.

As illustrative of the kind of casualties that occur, the details of several cases are fully given in the original Report: they comprise contusions and fractures, chiefly, but it does not seem necessary to introduce them here.

TABLE I.

TABLE showing Per-centage of Cases entered on Sick and Hurt Lists, having reference to General Totals and to the Numbers borne on the Books, for the Year 1869.

DISEASES.	Number on Sick-List.	Per-centage on Sick-List.	Per-centage on Numbers borne.	Total Admissions to Sick and Hurt Lists - - 1,148 Numbers borne - - 1,970
Scarlet Fever - -	2	·174	·101	Where cases of "Sick and Hurt" do not amount to more than a unit, they have been excluded from this "Tabulated Form," in so far as applying specially to the Lists referred to. Having reference specially to these Lists, the aggregate number for which the per-centage is given is 1,132, instead of 1,148, as shown by the Return "Nosologically arranged." The per-centage in relation to the "Numbers borne," is worked out in full.
Simple Continued Fever - - -	2	·174	·101	
Ague - - -	189	16·463	9·593	
Erysipelas - -	3	·261	·152	
Rheumatism - -	41	3·571	2·081	
Phthisis Pulmonalis -	9	·784	·457	
Hæmoptysis - -	10	·871	·507	
Epilepsy, &c. - -	2	·174	·101	
Insanity - - -	3	·261	·152	
Catarrh - - -	133	11·585	6·751	
Bronchitis - -	33	2·874	1·675	
Pneumonia and Pleurisy - - -	8	·696	·406	
Cynanche - - -	62	5·401	3·147	
Dyspepsia - -	20	1·742	1·015	
Diarrhœa - - -	55	4·790	2·791	
Colic, &c. - -	8	·696	·406	
Hæmorrhoids - -	7	·609	·355	
Phlegmon and Abscess	49	4·268	2·487	
Debility - - -	8	·696	·406	
Wounds, &c. &c. -	174	15·156	8·832	
Fractures - - -	7	·609	·355	
Sprains - - -	92	8·013	4·670	
Contusions - -	191	16·638	9·695	
Burns and Scalds -	24	2·090	1·218	

TABLE II.

TABULAR STATEMENT, arranged according to the Regions or Organs of the Body, of the various Injuries which have occurred consequent upon the Nature of the Duties upon which the Men were employed in the Dockyard during the Year 1869.

NATURE OF INJURY.	Head and Face.	Eye.	Upper Extremities.		Lower Extremities.		Thorax.	Abdomen.	Genitals.	Back.	Hip.	Crown.	Total.
			Right.	Left.	Right.	Left.							
Wounds, and	187	14	282	437	64	96	2	-	1	1	-	-	1,074
Abrasions	-	-	33	25	80	125	-	-	-	-	-	-	263
Fractures	1	-	2	2	-	1	-	-	-	-	-	-	6
{ Simple	-	-	-	-	-	1	-	-	-	-	-	-	1
{ Compound	-	-	-	-	-	-	-	-	-	-	-	-	-
Dislocations	-	-	-	-	-	-	-	-	-	-	-	-	-
Sprains	-	-	17	22	10	11	-	-	-	50	12	2	124
Contusions	29	49	204	322	86	81	15	-	4	14	12	2	818
Hernia	-	-	-	-	-	-	-	#1	-	-	-	-	1
Burns	-	22	19	16	2	-	-	-	-	-	-	-	59
Scalds	+5	2	7	1	-	1	-	-	-	-	-	-	16
TOTAL	222	87	565	825	243	315	17	1	5	65	24	4	2,302

*Hernia, Inguinal.

† Whole Body.

GENERAL REMARKS.

IN Table No. II., as a "Tabular Statement," is given an analysis of 2,360 cases of wounds and injuries occurring during the year 1869.

Of these cases only 488 were of sufficient gravity to require being entered on the hurt-list.

This is about one-fifth of the whole ; the great majority reporting themselves at the surgery, according to standing orders, have their slight wounds, abrasions, &c. &c., attended to ; the application is noted, and they return at once to their work.

Wounds are either incised or contused ; punctured wounds are so rare and exceptional as to require no special notice. The contused wounds are generally those of the head and face, caused by falls, accidental blows from a fellow workman's hammer, or slipping of planks or masses of wood, &c. Incised wounds of the eye do occur, but none are recorded for 1869 ; numerous cases, however, of impaction of spiculæ of fragments of iron take place in the cornea ; usually they are readily removed, frequently by the men themselves ; if deeply fixed and, causing much irritation, it is found to be a good plan to order rest and sedatives, when in a day or two the fragment becomes loose and is easily removed. The incised wounds of the upper extremities are confined to the hands and are chiefly caused by the chisle or lathe. Those of the lower extremities are due to blows of the adze, chiefly on the shin and instep.

Abrasions, now classified with wounds, are confined to the extremities, occurring in greater proportion in the lower ; owing to falls, slips on ladders, and blows from timber, iron plates, &c. &c.

Fractures occur but seldom, only six cases during 1869 ; one compound of left leg ; these have been already described under their respective heads in the nosological report rendered.

Of the various classes of workmen it appears that shipwrights and labourers suffer most from contusions ; the former specially from confusions of the head and face, and from adze wounds of lower extremities.

Boiler makers, smiths, and fitters suffer from wounds of the eye, from burns and scalds.

Shipwrights, caulkers, and riggers suffer most from abrasions, chiefly of the shins.

With the exception of the boiler explosion on board Her Majesty's ship *Thistle*, and the several injuries and deaths caused thereby, the year 1869 presents a remarkable immunity from serious accidents amongst a body of 1,900 artificers and workmen of all kinds employed in Her Majesty's Dockyard.

So far as the writer's experience goes, he finds it impossible to point out how to obviate the risks run by the various classes of workmen in reference to the wounds and injuries tabulated above. To shield the eye by any mechanical covering would make work more or less impracticable, and, after all, serious injuries to the eye are very rare. Falls, blows, slips, burns, and scalds are incidental to and inseparable from the different employments in the yard.

TABLE III.

RETURN of MEN superannuated during the Year 1869, with their Ages, Services, and Causes of Superannuation.

Super-annuated, 1869.	Cases.	Rating.	Age.	Service on which Pensioned.	Remarks showing Causes of Superannuation.
6 Jan.	Case 1	2nd Class rigger	Yrs. 45	Yrs. Mos. 26 7	Defective vision, both eyes; permanently unfit.
16 "	" 2	Master in yard craft	57	38 2	Advanced age. Chronic rheumatism; general debility. Permanently unfit.
28 "	" 3	Coppersmith	48	25 3	Vertigo; diseased liver; debility. Permanently unfit.
30 "	" 4	Leading man of shipwrights	47	24 5	Valvular disease of heart; general debility. Permanently unfit.
1 Feb.	" 5	Single fireman of smiths	49	25 8	Palpitation of heart; general debility; inguinal hernia of right side, sustained on duty. Permanently unfit.
3 "	" 6	Shipwright	60	30 0	Age. Permanently unfit.
25 "	" 7	Ditto	43	22 2	Extreme nervous debility. Permanently unfit.
12 March	" 8	Single stationed rigger	61	41 8	Age.
16 "	" 9	Leading man of riggers	66	40 3	Age.
25 "	" 10	2nd class anchor fireman of smiths	60	31 0	Age.
26 "	" 11	1st class anchor man	56	36 0	Severe contusions received while at work on board Her Majesty's ship <i>Lizard</i> .
26 "	" 12	Labourer	60	10 0	Age.
26 "	" 13	Ditto	60	28 3	Age.
26 "	" 14	Leading man of labourers	60	34 10	Age.
26 "	" 15	Single stationed shipwright	61	29 11	Age.
26 "	" 16	Shipwright	61	34 6	Age.
26 "	" 17	Ditto	61	29 9	Age.
26 "	" 18	Ditto	60	27 7	Age.
26 "	" 19	Ditto	61	28 5	Age.
26 "	" 20	Caulker	60	37 2	Age.
22 April	" 21	Quartermaster, yard craft	53	36 1	Palpitation and debility.
24 "	" 22	Messenger	59	16 1	Cataract in both eyes
19 May	" 23	Labourer	43	22 2	Gout; chronic rheumatism; palpitation of heart (functional).
19 "	" 24	Sawyer	52	31 3	Physical debility.
19 "	" 25	Viceman and fitter	53	31 2	Defective vision; chronic rheumatism.
19 "	" 26	1st class smith's hanimerman	59	29 1	Defective vision; chronic rheumatism.
9 June	" 27	Labourer	39	12 2	Phthisis.
24 "	" 28	Founder	58	33 4	Superannuated " on Reduction."

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, CHATHAM,
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
STAFF SURGEON HENRY PIERS.

MEDICAL and SURGICAL REPORT of Her Majesty's DOCKYARD, *Chatham*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	-	9	9	-	-	-	-
	Typhus Fever - - -	-	2	1	-	1	-	-
	Enteric Fever - - -	-	4	2	-	2	-	-
	Simple Continued Fever	2	2	2	-	1	-	1
	Ague - - - - -	-	10	9	-	-	-	1
	Febricula - - - -	-	4	4	-	-	-	-
	Influenza - - - -	-	11	9	-	-	-	2
	Erysipelas - - -	1	9	7	-	2	-	1
	Diphtheria - - -	-	1	1	-	-	-	-
II. General Diseases, Section B.	Rheumatism - - -	8	128	123	-	1	1	17
	Gout - - - - -	-	11	10	-	-	-	1
	Syphilis, Primary -	-	3	3	-	-	-	-
	Phthisis Pulmonalis -	4	11	6	-	7	2	-
	Anasarca - - - -	1	-	-	-	-	1	-
III. Diseases of the Nervous System and Organs of the Special Senses.	Apoplexy - - - -	1	-	-	-	-	1	-
	Encephalitis - - -	-	3	3	-	-	-	-
	Paralysis - - - -	1	4	3	-	1	-	1
	Epilepsy - - - - -	-	2	2	-	-	-	-
	Neuralgia - - - -	1	19	17	-	-	2	1
	Hypochondriasis -	-	1	1	-	-	-	-
	Insanity - - - - -	3	2	3	-	-	1	1
	Ophthalmia - - - -	1	8	8	-	-	-	1
	Diseases of the Ear -	-	4	4	-	-	-	-
	Diseases of the Nose	1	-	1	-	-	-	1
IV. Diseases of the Circulatory System.	Diseases of (Functional	1	-	1	-	-	-	-
	the Heart (Organic	1	6	3	-	2	2	-
V. and VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - -	1	-	1	-	-	-	-
VII. Diseases of the Respiratory System.	Diseases of the Larynx	-	2	-	-	-	-	2
	Catarrh - - - - -	17	355	360	-	-	2	10
	Bronchitis - - - -	-	25	19	-	1	-	5
	Asthma - - - - -	-	1	-	-	1	-	-
	Pneumonia - - - -	1	11	10	-	1	-	1
	Pleurisy - - - - -	1	10	9	-	-	-	2
	Hæmoptysis - - -	3	4	6	-	-	1	-

* Cases "remaining by last Return" are not to be inserted in these columns, but the number of days'

between the 1st of January 1869 and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases, excluding those remaining by First Column.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
4	109	3	88	2	68	-	-	-	-	9	265
-	-	1	20	1	67	-	-	-	-	2	87
2	53	1	139	-	-	1	19	-	-	4	211
-	-	-	137	1	40	1	103	-	-	2	280
-	-	3	273	7	81	-	-	-	-	10	354
1	4	1	6	1	22	1	5	-	-	4	37
1	5	5	36	2	54	3	17	-	-	11	112
1	8	1	38	4	28	3	51	-	-	9	125
-	-	1	7	-	-	-	-	-	-	1	7
11	105	43	984	36	509	32	784	6	227	128	2,609
-	-	1	13	5	37	5	62	-	-	11	112
1	24	2	22	-	-	-	-	-	-	3	46
-	18	6	808	3	342	2	69	-	-	11	1,237
-	-	-	-	-	49	-	-	-	-	-	49
-	-	-	-	-	-	-	-	-	-	-	-
-	-	1	27	1	37	1	63	-	78	-	78
1	23	-	-	-	-	3	394	-	-	3	127
-	-	1	2	-	-	-	-	-	-	4	417
5	48	5	36	6	121	2	42	1	4	2	6
-	-	-	-	-	-	1	71	1	79	19	326
-	-	-	-	2	410	-	80	-	-	1	71
2	68	4	22	2	31	-	-	-	-	2	500
-	-	-	-	3	25	1	18	-	-	8	121
-	-	-	-	-	4	-	-	-	-	4	43
-	-	-	-	-	-	-	-	-	-	-	4
-	-	-	-	-	18	-	-	-	-	-	18
1	24	1	29	2	118	2	214	-	-	6	385
-	5	-	-	-	-	-	-	-	-	-	5
-	-	1	37	1	1	-	-	-	-	-	-
82	684	129	1,424	90	779	46	393	8	94	2	38
4	111	7	131	10	274	3	65	1	11	355	3,374
-	-	-	-	1	3	-	-	-	-	25	592
4	169	1	30	4	122	2	79	-	-	1	3
1	23	6	195	2	55	-	-	-	-	11	400
2	10	-	-	2	140	-	92	1	17	10	290
-	-	-	-	-	-	-	-	-	-	4	242

MEDICAL and Surgical Report of Her Majesty's Dockyard, Chatham,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
VIII. Diseases of the Digestive System.	Cynanche - - -	2	79	79	-	-	-	2
	Stomatitis - - -	-	1	1	-	-	-	-
	Hæmatemesia - - -	1	2	3	-	-	-	-
	Dyspepsia - - -	3	73	71	-	-	1	4
	Dysentery - - -	-	2	2	-	-	-	-
	Diarrhœa - - -	1	112	110	-	-	-	3
	Colic and Constipation - -	-	25	23	-	1	-	1
	Hæmorrhoids - - -	-	2	1	-	-	-	1
	Hernia - - -	-	2	2	-	-	-	-
	Jaundice - - -	-	4	3	-	1	-	-
	Enteritis - - -	-	1	1	-	-	-	-
	Hepatitis - - -	-	2	2	-	-	-	-
	Fistula in Ano - - -	-	3	2	-	-	-	1
	Prolapsus Ani - - -	-	1	1	-	-	-	-
IX. and X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	4	3	-	1	-	-
	Pyelitis - - -	-	1	1	-	-	-	-
	Epididymitis - - -	1	1	2	-	-	-	-
	Stricture - - -	-	3	1	-	-	-	2
	Varicocele - - -	-	1	1	-	-	-	-
XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess - -	4	76	74	-	1	-	5
	Ulcer - - -	-	1	1	-	-	-	-
	Psoriasis - - -	-	1	1	-	-	-	-
	Pemphigus - - -	-	1	1	-	-	-	-
	Lichen - - -	-	1	-	-	-	1	-
	Herpes - - -	-	1	1	-	-	-	-
	Eczema - - -	-	3	3	-	-	-	-
	Urticaria - - -	-	1	1	-	-	-	-
Unclassed - - -	Debility - - -	3	12	12	-	1	1	1
Wounds and Injuries -	Wounds - - -	9	321	317	-	-	-	13
	Fractures - - -	2	24	17	-	1	4	4
	Dislocations - - -	1	-	1	-	-	-	-
	Sprains - - -	1	135	134	-	-	-	2
	Contusions - - -	8	338	337	-	-	-	9
	Burns and Scalds - - -	3	95	97	-	-	-	1
	Submersion and Drowning -	-	1	-	-	1	-	-
	Concussion of Brain - -	-	5	4	-	1	-	-
TOTAL - - -		88	1,997	1,947	-	28	20	90

between the 1st of January 1869 and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases, excluding those remaining by First Column.	Total Days' Sickness from each Disease.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
18	164	39	392	15	97	6	75	1	27	79	755
1	3	-	-	-	-	-	-	-	-	1	3
-	-	-	-	2	53	-	-	-	-	2	53
8	49	34	392	19	309	11	240	1	4	73	994
1	11	-	-	1	11	-	-	-	-	2	22
23	153	36	216	34	240	19	133	-	-	112	742
8	35	7	44	6	36	4	35	-	-	25	150
2	8	-	-	-	-	-	-	-	-	2	8
-	-	-	-	1	19	1	3	-	-	2	22
-	-	-	-	3	59	1	42	-	-	4	101
-	-	-	-	1	23	-	-	-	-	1	23
-	-	-	-	2	31	-	-	-	-	2	31
-	-	1	23	-	-	2	77	-	-	3	100
-	-	-	-	1	19	-	-	-	-	1	19
-	-	-	-	-	-	-	-	-	-	-	-
-	-	2	117	2	58	-	-	-	-	4	175
-	-	-	-	1	53	-	-	-	-	1	53
1	50	-	-	-	-	-	-	-	-	1	50
-	-	-	-	3	44	-	-	-	-	3	44
1	66	-	-	-	-	-	-	-	-	1	66
-	-	-	-	-	-	-	-	-	-	-	-
16	155	23	326	25	426	10	154	2	29	76	1,090
-	-	1	14	-	-	-	-	-	-	1	14
-	-	1	51	-	-	-	-	-	-	1	51
-	-	-	-	-	-	1	6	-	-	1	6
-	-	-	-	-	-	1	46	-	-	1	46
-	-	-	-	1	16	-	-	-	-	1	16
-	-	1	13	1	10	1	8	-	-	3	31
-	-	-	-	-	-	1	5	-	-	1	5
-	-	-	-	-	-	-	-	-	-	-	-
1	18	3	189	3	30	4	60	1	12	12	309
-	-	-	-	-	-	-	-	-	-	-	-
83	1,215	118	1,965	70	1,082	45	806	5	137	321	5,205
1	236	5	207	8	317	9	576	1	112	24	1,448
-	-	-	179	-	-	-	-	-	-	-	179
21	139	55	840	40	763	17	232	2	12	135	1,986
72	812	115	1,410	107	1,732	39	633	5	54	338	4,641
18	188	37	568	28	304	11	220	1	3	95	1,283
-	-	-	-	-	-	1	-	-	-	1	-
2	65	1	27	1	14	1	4	-	-	5	110
400	4,858	703	11,477	563	9,181	294	5,986	37	900	1,997	32,402

MEDICAL AND SURGICAL REPORT

OF

HER MAJESTY'S DOCKYARD, CHATHAM,

For the Year 1869,

By Staff Surgeon HENRY PIERS.

REPORT, for the Year 1869, relative to the Sick and Hurt of this Dockyard,
under the several heads prescribed.

Appendix.

IN the following remarks, I purpose giving, 1st. A general summary of the various forms of disease and injury entered on the sick and hurt lists, with observations in connection with them, and on the general sanitary condition of the neighbourhood, in respect to zymotic diseases, or on any other causes injuriously affecting the health of the men.

Of general diseases of the zymotic section, there were nine cases of scarlet fever, two of typhus fever, four of enteric fever, two of continued fever, four of febricula, ten of ague, nine erysipelas, and one of diphtheria. One case of typhus and two of enteric fever proved fatal.

These cases, on examination, I find to have been pretty evenly distributed over the different parts of the towns occupied by the men, so that while the hygienic reputation of some localities may be less favourable than others, there is nothing here to indicate one district being more unhealthy than another.

Bearing in mind the large and very poor population of these towns, that, excepting for the Government establishments there is no system of sewerage, but the old objectionable practice of cesspits, and that at the same time many of the houses obtain their water supply from wells, it is not to be wondered at that the morbid agencies generating these diseases are found to be, in a greater or less degree, in almost continuous operation. It is rather a matter of surprise, that they do not oftener break out in more active epidemic forms. But while, from what has just been related, the general sanitary condition of these towns cannot be deemed otherwise than bad, and such as would seem to be very undesirable for so large and important a place, I cannot but think that, under the circumstances, the degree of restriction of this class of diseases reflects credit on the Board of Health established in these towns.

The malarious district bordering closely on these towns to the eastward is a permanent source of ague, though not to any considerable degree.

Of rheumatism and gout, there were 139 cases. Of the former one died, and one was superannuated. Of phthisis pulmonalis, there were eleven cases, four of which died, and two were superannuated. Of the other general diseases there were three cases.* The neighbouring ague district probably tends to a rather large measure of rheumatism, which, I am inclined to think pertains to these towns, the humidity from the river, and the often continuous easterly winds, between February and June, adding to this tendency.

The exposure of the men working in the "iron-clads" to all the variations of weather and the inclemency of the winters, and the testing for leakage and caulking the double bottoms must, I think, be fruitful sources of rheumatism, as also of other diseases.

Though the air of this locality is somewhat harsh in the spring and trying, then, for weak lungs, I have not observed that phthisis pulmonalis is more than usually prevalent. Generally the air may be said to be salubrious, bracing, and exhilarating, while the elevated ground of "the Lines," for a great part of the year, forms a most healthful recreation-ground for all classes, and with the adoption of a proper system of sewerage, few towns in England would, I believe, enjoy a higher standard of health.

The

* Primary Syphilis.

The women employed in the ropery, though the atmosphere is full of minute particles of hemp, which are seen to settle on their heads and clothes, and which they must continually inhale during their work, do not appear to suffer at all from phthisis pulmonalis, or, indeed, any chest affection, as the result of their employment.

Of diseases of the nervous system and organs of the special senses, there were forty-two cases, of which one of paralysis terminated fatally, and two of neuralgia and one of epileptic vertigo were superannuated.

Of diseases of the heart, functional and organic, there were seven cases, two proving fatal, and one being superannuated.

Diseases of the respiratory system yielded 419 cases, of which four died and four were superannuated. From the exposure required on the part of many, in various parts of the yard, particularly on the "iron-clads," this large number is not surprising, to which, as observed before, working in the cold, damp double bottoms must materially add. There is also a circumstance beyond the yard, which I think may contribute considerably in swelling the number of these and other affections, viz., crossing "the Lines" twice or four times a day by a large number of them, in all weathers, and early in the mornings.

Impure air, often found in the double bottoms of the ships, and supposed to be generated by the different compositions employed about them, must also tend to vitiate the blood and depress the vital energy, and thus render the men working in these parts a more ready prey to disease, particularly pulmonary affections. To obviate this evil as much as possible, fresh air is pumped into the parts, and latterly all improved means of ventilation have been adopted.

Of diseases of the digestive system, there were 309 cases, of which one of jaundice and one of colic and constipation were fatal.

Diseases of the urinary and generative systems gave ten cases, one of Bright's disease proving fatal.

Of the organs of locomotion there was no case.

Of diseases of the cellular tissue and cutaneous system there were eighty-five cases, of which one died of abscess, and one of lichen was superannuated.

There were twelve cases of debility, of which one died and one was superannuated.

2nd.—A TABULAR STATEMENT, arranged according to the Regions of the Body, of Injuries consequent upon the Nature of the Duties upon which the Men were employed.

	Head and Face.	Eyes.	Arm.	Fore-arm.	Hands.	Chest.	Abdomen.	Back.	Thigh.	Leg.	Feet.	Totals.	Minor Injuries not on Hurt List.
Wounds - - - -	49	54	1	32	100	-	-	-	4	57	23	320	1,456
Fractures - - - -	2	-	-	2	13	2	-	-	-	1	4	24	-
Sprains - - - -	-	-	10	24	13	8	7	39	4	7	23	135	185
Contusions - - - -	11	67	13	17	61	13	9	13	13	31	91	339	877
Burns and Scalds - - -	13	35	2	14	14	-	-	-	-	1	16	95	316
Dislocations - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-
Submersions and Drowning -	1	-	-	-	-	-	-	-	-	-	-	1	-
Concussion of Brain - -	5	-	-	-	-	-	-	-	-	-	-	5	-
TOTAL - - - -	81	156	26	89	201	23	16	52	21	97	157	919	2,824

Appendix.

Hurts, of the different forms, have been very numerous since the introduction of iron ship building, but are, I think, gradually diminishing, in gravity as well as number.

The hands, eyes and feet appear to suffer most; other parts of course, may sustain equal injury without disabling men from work, while the least injury of the eyes is a matter of importance, demanding care and measures preventive of inflammation, which accounts for the large number of injuries of these organs on the hurt-list.

Men employed at certain kinds of work, dangerous to the eyes, are supposed to wear wire goggles; but I am inclined to think these guards are commonly neglected. Similar goggles, with thick glass centres, might be preferable as affording more distinct vision, and meet with more acceptance from the men. To prevent the glass being smashed, and the pieces driven into the eye, by large pieces of metal, the setting should not be very strong, though the force that would break in pieces a small piece of *thick* glass and drive it into the eye, would certainly, without such protection, itself destroy the organ; or the glass goggles need not be used when danger from large pieces of metal is apprehended; but 90 per cent. or more of injuries of the eyes are caused by small and minute pieces of metal.

Shipwrights, as regards risks, are liable to falls from stages and down hatchways; adze and axe wounds of the legs; wounds of the eyes from chips of iron; and burns of the eyes and hands from hot rivets and their scales. A system of lighting the ships with gas, adopted, I believe, in some private shipbuilding establishments, I think would tend materially to diminish accidents, and also the dampness and cold experienced in the iron ships in the winter.

"Holders-up" suffer from contusions and burns from hot rivets.

Millwrights and fitters are subject to contusions and severe lacerated wounds of the hands and arms, from entanglement with machinery; also fractures of the same parts; sometimes, though happily not often, the injuries from machinery are very serious, and even fatal. These men are also liable to wounds of the eyes from chips of metal.

The women in the Ropery have been cut by the hemp suddenly encircling their wrists. To obviate this they are now supplied with leathern gauntlets.

For the prevention or mitigation of injuries from machinery, it would be very desirable, if means could be adopted, as is the case in the Ropery, for speedy, instant communication between the workshops and the engine-rooms. Since the period for which this Report is rendered, a man was caught by machinery in the millwrights' shop, and revolved round a shaft, eighteen inches only above which was an iron beam against which he was being continually dashed, while another man ran from the shop, down a flight of steps to and along a shop underneath, out of the door, and then a considerable distance to the enginehouse, before the machinery could be stopped and the man released. Of course he was literally crushed and collapsed; nevertheless he lived an hour or two.

Labourers are liable to contusions and wounds, of the hands and feet particularly, from wood and iron.

A TABULAR STATEMENT of the Number of Men Superannuated, their Length of Service, and Reasons for their Superannuation.

Cases.	Qualities.	Age.	Servitude.	CAUSES.
			<i>Yrs. mos.</i>	
Case 1 -	Shipwright -	43	12 10	Disease of kidneys and dropsy.
" 2 -	Storehouseman -	41	21 9	Insanity.
" 3 -	Shipwright -	43	21 4	Phthisis.
" 4 -	Ditto -	57	36 4	Hemiplegia.
" 5 -	Spinner -	54	29 3	Varicose veins and hernia.
" 6 -	Smith -	54	29 0	Hæmoptysis.
" 7 -	Hammerman -	44	18 4	Concussion, and impaired intellect.
" 8 -	Ditto -	58	27 5	Deaf, and disease of lower jaw.
" 9 -	Shipwright -	58	29 0	Vision very defective.

Tabular Statement of the Number of Men Superannuated, &c.—*continued*.

Cases.	Qualities.	Age.	Servitude.	CAUSES.
			<i>Yrs. mos.</i>	
Case 10 -	Labourer - -	44	25 1	A very bad hernia.
" 11 -	Smith - -	59	29 1	Eyesight very defective.
" 12 -	Timber issuer - -	57	36 6	Eyesight very bad.
" 13 -	Sawyer - -	51	30 11	Rheumatism, and eyesight defective.
" 14 -	Rigger - -	52	26 5	Neuralgic pains of head, and eyesight
" 15 -	Shipwright - -	40	10 1	Disease of the chest.
" 16 -	Caulker - -	59	29 2	Chronic rheumatism and debility.
" 17 -	Millwright - -	56	22 3	Rheumatism.
" 18 -	Moulder - -	56	19 8	- ditto.
" 19 -	Metal turner - -	57	21 11	Rheumatism and shortness of breath.
" 20 -	Smith - -	59	32 3	Fistula and hernia.
" 21 -	Timber tester - -	58	25 3	Eyesight and hearing defective, and shortness of breath.
" 22 -	Shipwright - -	54	27 3	Eyesight defective, hernia, and vertigo.
" 23 -	Ditto - -	37	17 5	Insanity.
" 24 -	Ditto - -	53	30 3	Vertigo.
" 25 -	Ditto - -	51	23 10	Disease of heart.
" 26 -	Smith - -	55	24 4	Sight very defective.
" 27 -	Rigger - -	58	23 7	Paralysis and debility.
" 28 -	Shipwright - -	49	14 7	Vertigo from organic disease.
" 29 -	Ditto - -	48	25 7	Fracture of leg.
" 30 -	Labourer - -	44	23 3	Phthisis.
" 31 -	L. M. shipwright -	59	37 0	Fracture of thigh.
" 32 -	Sawyer - -	51	31 5	Compound fracture of hand, and loss of two fingers.
" 33 -	Shipwright - -	51	28 10	Nervous debility, and hypochondriasis.
" 34 -	Sawyer - -	58	29 8	No disease; his officer reported him as unequal for his work.
" 35 -	Shipwright - -	47	24 3	Pain in the back, from an old abscess.
" 36 -	Caulker - -	36	10 9	Debility.
" 37 -	Metal mill - -	54	25 8	Chronic rheumatism.
" 38 -	Storehouseman - -	55	30 7	Rheumatism and bronchitis.

The mean strength of the yard was 3,816. The number of sick and hurt was 1,997. The total days' sickness was 32,382. This gives an average of nearly eighty-nine men per diem, or 2½ per cent., and amounts to nearly half the mean strength, being "sick" or "hurt" during the year.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, PORTSMOUTH.
BETWEEN THE
1ST OF JANUARY AND THE 31ST OF DECEMBER 1869,
BY
STAFF SURGEON J. ACHESON.

MEDICAL and SURGICAL REPORT of Her Majesty's Dockyard, *Portsmouth*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	1	9	9	-	1	-	-
	Typhus Fever - - -	1	1	2	-	-	-	-
	Simple Continued Fever - -	1	5	5	1	-	-	-
	Varicella - - -	-	1	1	-	-	-	-
	Erysipelas - - -	-	7	7	-	-	-	-
II. General Diseases, Section B.	Rheumatism - - -	12	166	165	1	1	-	11
	Gout - - -	-	10	10	-	-	-	-
	Phthisis Pulmonalis - -	2	13	7	-	7	1	-
III. Diseases of the Nervous System and Organs of the Special Senses.	Cephalalgia - - -	-	4	4	-	-	-	-
	Paralysis - - -	1	6	6	-	-	1	-
	Encephalitis - - -	-	1	-	-	1	-	-
	Epilepsy - - -	-	2	2	-	-	-	-
	Neuralgia - - -	-	6	6	-	-	-	-
	Insanity - - -	1	-	-	-	-	1	-
	Ophthalmia - - -	1	6	7	-	-	-	-
	Diseases of the Ear - -	-	2	2	-	-	-	-
IV. Diseases of the Circulatory System.	Diseases of the Heart { Functional - -	1	5	6	-	-	-	-
	{ Organic - -	1	2	-	-	3	-	-
	Hæmoptysis - - -	1	5	5	-	1	-	-
VII. Diseases of the Respiratory System.	Catarrh - - -	9	274	270	-	-	-	13
	Bronchitis - - -	4	39	36	-	2	-	5
	Asthma - - -	1	1	2	-	-	-	-
	Pneumonia - - -	-	10	5	-	3	-	2
	Pleurisy - - -	1	3	4	-	-	-	-
VIII. Diseases of the Digestive System.	Cynanche - - -	3	36	35	-	2	-	2
	Dyspepsia - - -	2	55	56	-	-	-	-
	Diarrhœa - - -	-	79	78	-	1	-	1
	Colic and Constipation - -	2	11	13	-	-	-	-
	Hernia - - -	-	15	15	-	-	-	-
	Hæmatemesis - - -	-	1	1	-	-	-	-
	Hepatitis - - -	1	2	3	-	-	-	-
	Fistula in Ano - - -	-	2	2	-	-	-	-

between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease, &c.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
5	136	4	111	-	-	-	-	-	-	9	247
-	-	-	-	1	46	-	79	-	-	1	125
-	26	4	180	1	41	-	-	-	-	5	247
1	10	-	-	-	-	-	-	-	-	1	10
2	23	-	-	3	68	2	16	-	-	7	107
11	327	40	904	68	1,737	43	1,169	4	74	168	4,211
-	-	4	63	2	23	4	94	-	-	10	180
3	141	3	524	5	625	1	9	1	39	13	1,338
-	-	1	6	2	34	1	99	-	-	4	141
-	-	1	50	1	54	3	269	1	138	6	511
1	3	-	-	-	-	-	-	-	-	1	3
-	-	-	-	-	-	2	115	-	-	2	115
-	-	4	49	2	18	-	-	-	-	6	67
-	-	-	-	-	33	-	-	-	-	-	33
2	105	2	27	-	32	1	99	1	66	6	329
-	-	-	-	1	7	1	20	-	-	2	27
1	15	1	44	1	18	2	11	-	-	5	88
-	-	-	-	2	57	-	90	-	-	2	147
-	-	-	41	4	116	1	59	-	-	5	216
58	516	70	793	94	1,145	43	671	9	333	274	3,458
3	34	12	628	14	441	6	211	4	245	39	1,559
-	-	-	-	-	51	1	18	-	-	1	69
-	-	1	43	4	133	4	198	1	177	10	551
-	-	1	257	2	87	-	-	-	-	3	344
8	196	16	214	8	63	4	133	-	-	36	606
17	101	11	157	16	218	10	168	1	72	57	716
12	107	15	104	27	228	22	173	3	18	79	630
1	8	3	59	3	26	2	29	2	79	11	201
-	-	2	-	2	-	10	1	1	-	15	1
-	-	1	10	-	-	-	-	-	-	1	10
-	-	1	30	-	-	1	40	-	-	2	70
-	-	-	-	1	101	1	34	-	-	2	135

MEDICAL and Surgical Report of Her Majesty's Dockyard, *Portsmouth*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
IX. & X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	3	2	-	1	-	-
	Gonorrhoea - - -	-	1	1	-	-	-	-
	Stricture - - -	1	1	2	-	-	-	-
	Orchitis - - -	-	1	1	-	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess -	3	77	76	-	-	-	4
	Ulcer - - -	-	1	1	-	-	-	-
	Eczema - - -	-	3	2	1	-	-	-
	Herpes Zoster - - -	-	2	2	-	-	-	-
Unclassed - - -	Debility - - -	-	6	6	-	-	-	-
Wounds and Injuries -	Wounds - - -	12	231	228	5	-	-	10
	Fractures - - -	5	17	13	7	1	-	1
	Dislocations - - -	1	6	4	2	-	-	1
	Sprains - - -	7	102	106	-	-	-	3
	Contusions - - -	17	249	252	3	-	-	11
	Burns and Scalds - -	-	36	35	-	-	-	1
TOTALS - - -		92	1,515	1,495	20	24	3	65

		Number of all Ranks and Ratings in the Yard during the Period for which this Return is rendered; viz., between					TOTAL of each Rank.
		15 & 25.	25 & 35.	35 & 45.	45 & 55.	55 & 65.	
Officers, Clerks, &c. - - -		-	-	-	-	-	119
Men classed according to their Trade or Employment -	Factory - - -	-	-	-	-	-	1,004
	Shipwrights, &c. - -	-	-	-	-	-	1,688
	Joiners - - -	-	-	-	-	-	230
	Riggers - - -	-	-	-	-	-	226
	Painters - - -	-	-	-	-	-	45
	Labourers - - -	-	-	-	-	-	899
TOTAL - - -		-	-	-	-	-	4,211

between the 1st of January and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz.; from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease, &c.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
1	40	-	-	2	258	-	-	-	-	3	298
-	-	1	9	-	-	-	-	-	-	1	9
-	-	-	-	-	-	1	195	-	90	1	285
1	53	-	-	-	-	-	-	-	-	1	53
19	127	21	413	17	220	18	292	2	72	77	1,124
-	-	-	-	1	29	-	-	-	-	1	29
2	19	-	-	-	-	1	20	-	-	3	39
-	-	-	-	1	23	1	3	-	-	2	26
4	127	1	6	1	17	-	-	-	-	6	150
36	653	81	1,638	62	1,629	49	1,613	3	62	231	5,595
1	36	3	173	11	328	2	130	-	-	17	667
-	-	3	163	1	1	2	124	-	-	6	288
17	178	29	655	27	540	25	618	4	193	102	2,184
32	447	66	1,164	92	2,075	43	1,584	6	149	249	5,419
6	55	10	185	13	151	7	76	-	-	36	467
244	3,483	432	8,702	492	10,673	314	8,460	43	1,807	1,515	33,125

Of the Patients under Treatment there have been			
Under 7 Days.	7 Days and under 14	14 Days and upwards.	Recommended for Superannuation by the Surgeon.
-	-	-	
-	-	-	
534	415	658	
-	-	-	
-	-	-	
-	-	-	
-	-	-	

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, PORTSMOUTH,
For the Year 1869,
By Staff Surgeon J. ACHESON.

REMARKS.

Appendix.

THE total number of days' sickness (exclusive of that arising from injuries) for the year 1869, was 17,050; the total number of cases, 859. Of these, 529 were examples of such disease as might, with a tolerable amount of certainty, be attributed in a great measure to exposure to wet and cold. Thus, of rheumatism there were 166 cases, with a total days' sickness of 3,883; of bronchitis, forty cases, with a total days' sickness of 1,437; of catarrh, 274 cases, with a total days' sickness of 3,280; of cynanche, thirty-six cases, with a total days' sickness of 579; of pneumonia, ten cases, with a total days' sickness of 551; and of pleuritis, three cases, with a total days' sickness of 305 days. What, therefore, might be anticipated by one possessing any knowledge of the circumstances of the men employed, and of the conditions under which their work is performed, is thus amply proved to be the fact; viz., that the risk, as far as disease is concerned, to which dockyard men are chiefly subjected, is that arising from exposure to the joint influence of wet and cold. A large number of these men live at a distance of between one and a-half mile and two miles from the yard; the remainder, with very few exceptions indeed, at a distance of more than a mile. It frequently happens, therefore, that before their day's work is commenced they are wet through, and, whilst in such a state, are unavoidably compelled to labour in parts of the yard exposed to keen and cutting winds. It is true that the artisan, if perchance he have only a wife and himself to provide for, may have money enough to purchase such articles of clothing as may enable him to defy the wet and the cold; and he is, moreover, for the most part under shelter whilst at work; but the ordinary labourer, whilst as a rule he is of worse physique than the artisan, and therefore more obnoxious to the bad influence of exposure to wet and cold, is also very poor, and the nature of his employment is such as to keep him very much in the open air. The average duration of the diseases above-mentioned was as follows: rheumatism, twenty-three days; bronchitis, thirty-six days; catarrh, twelve days; cynanche, seventeen days; pneumonia, fifty-five days; pleuritis, 101 days. The total amount of days' sickness arising from them was 10,035, considerably more than that arising from all the other diseases added together.

I have already alluded to one evil resulting from the considerable distance at which the majority of the men live from the scene of their work. I will now mention another; this, viz., that thereby it is a necessary consequence that the principal meal of the day be eaten hurriedly, and be immediately followed by a long and quick walk; under these circumstances, the proper assimilation of the food is scarcely possible, and the formation of lactic and lythic acids is induced. This being true, we cannot be surprised if constitutional derangement of some sort or other be the result; and, inasmuch as the secretions of those suffering from rheumatism are frequently loaded with such matters, it is probable that therein exists another cause for the great prevalence of that disease amongst those of whom I am writing; to the same cause, doubtless, is owing the large number of cases of dyspepsia placed on record; viz., fifty-five, with a total days' sickness of 712.

As many of the men are necessarily poorly clothed, and fed, and housed, phthisis is of course a not unfrequent malady; of it there were accordingly, during the year 1869, thirteen examples, with a total days' sickness of 1,223.

The records contain mention of only five cases of continued fever, and one of typhoid fever. The comparative freedom from such diseases may, I think, be accounted for by the fact of the men spending so much of their time in the dockyard, and away, therefore, from the contaminated atmosphere of their crowded homes and neighbourhood.

During

During a considerable portion of the period embraced by this Report, scarlatina was prevalent in the surrounding neighbourhood; the sick-list of the yard, however, contained nine cases only of that disease.

The deaths recorded during the year were as follows:—Bronchitis, two; rheumatism, one; cynanche, two; diarrhoea, one; Bright's disease, one; scarlatina, one; disease of the heart, two; phthisis, six; hæmoptysis, one; pneumonia, three.

Appendix.

CASES of MEN belonging to *Portsmouth Dockyard* who were Superannuated during the Year 1869.

Cases.	Age.	Length of Service.		For what Superannuated.
		Yrs.	mos.	
Case 1	-	51	25 2	Insanity, result of injuries of the head.
" 2	-	59	36 4	Rupture. Defective vision.
" 3	-	49	19 4	General debility.
" 4	-	38	14 0	General debility.
" 5	-	48	21 1	Rupture. Hydrocele.
" 6	-	59	23 4	General debility.
" 7	-	59	28 10	Chronic bronchitis.
" 8	-	58	28 10	Contusion of back and general debility.
" 9	-	59	36 0	Rupture. General debility.
" 10	-	59	35 5	Defective vision. General debility.
" 11	-	54	30 10	Phthisis.
" 12	-	44	23 1	Injury of right forefinger.
" 13	-	49	25 10	Chronic rheumatism.
" 14	-	47	26 7	Defective vision.
" 15	-	59	25 5	Vertigo, result of injury of head.
" 16	-	58	27 1	Defective vision.
" 17	-	51	27 4	Vertigo, result of injury of head.
" 18	-	59	26 7	Same, result of injury of head. Defective vision.
" 19	-	53	22 5	Loss of thumb and three fingers of right hand.
" 20	-	57	23 8	Defective vision. General debility.
" 21	-	58	37 0	General debility.
" 22	-	38	15 6	Defective vision, result of injury of head.
" 23	-	53	30 6	Injury of right hand.
" 24	-	41	16 7	General debility.
" 25	-	55	32 0	Double rupture. General debility.
" 26	-	53	29 0	Deafness. General debility.
" 27	-	58	29 2	Defective vision.
" 28	-	35	13 3	Loss of right and impaired vision of left eye, result of injuries.
" 29	-	59	37 0	General debility.
" 30	-	56	24 8	Perinæal fistula.
" 31	-	37	14 1	Rupture.
" 32	-	46	24 2	Rupture.
" 33	-	55	33 1	Asthma.
" 34	-	56	24 1	General debility.
" 35	-	42	19 2	Epilepsy. Cataract.
" 36	-	59	37 0	Defective vision. General debility.
" 37	-	40	16 10	Chronic rheumatism.
" 38	-	52	28 8	Injury of right wrist.
" 39	-	42	20 0	Disease of testicle.
" 40	-	48	25 6	Chronic rheumatism.
" 41	-	54	30 11	Vertigo. General debility.
" 42	-	36	14 5	Defective vision.
" 43	-	54	33 2	Ulcer. General debility.
" 44	-	44	23 0	General debility.
" 45	-	56	18 4	Defective vision. General debility.

Appendix.

Cases of Men belonging to *Portsmouth Dockyard, &c.—continued.*

Cases.	Age.	Length of Service.		For what Superannuated.
		Yrs.	mos.	
Case 46 -	59	10	7	Paralysis.
" 47 -	59	32	9	Chronic bronchitis.
" 48 -	49	23	4	Chronic rheumatism.
" 49 -	43	19	3	Renal disease.
" 50 -	58	26	1	Defective vision. General debility.
" 51 -	49	23	0	General debility.
" 52 -	44	23	3	Injury of back.
" 53 -	49	23	6	Loss of sight of left, and impaired sight of right eye, by injury.
" 54 -	51	30	0	Rupture.
" 55 -	43	17	3	Disease of heart.
" 56 -	52	23	9	Chronic rheumatism.
" 57 -	56	34	0	General debility.
" 58 -	57	31	4	Defective vision.
" 59 -	54	24	8	Paralysis.
" 60 -	51	31	0	Chronic rheumatism.
" 61 -	59	25	10	General debility.
" 62 -	37	15	1	Dyspepsia and general debility.
" 63 -	49	21	2	Deaf. Defective vision.
" 64 -	53	30	1	Chronic rheumatism.
" 65 -	55	27	8	Defective vision. General debility.
" 66 -	54	30	6	Chronic rheumatism.
" 67 -	43	22	3	General debility.
" 68 -	57	35	6	General debility.
" 69 -	36	13	8	Phthisis.
" 70 -	59	34	2	Chronic rheumatism.
" 71 -	35	12	0	Chronic rheumatism.
" 72 -	57	37	9	Chronic rheumatism.
" 73 -	58	24	6	Injury of back.
" 74 -	49	25	5	Loss of use of right hand, result of injury.
" 75 -	43	14	10	Chronic bronchitis.
" 76 -	47	24	0	Vertigo.
" 77 -	48	23	4	Chronic rheumatism.
" 78 -	55	33	0	Chronic rheumatism.
" 79 -	56	31	1	Chronic bronchitis.
" 80 -	46	24	6	Stiff left forefinger, result of injury.
" 81 -	37	15	1	Renal disease.
" 82 -	39	16	0	Lame, result of injury of left ankle.
" 83 -	58	29	2	Disease of heart.
" 84 -	54	37	11	Prolapsus ani.
" 85 -	51	29	4	Rupture. Defective vision.
" 86 -	53	31	7	Chronic rheumatism.
" 87 -	49	20	10	Impaired vision.
" 88 -	47	20	2	Vertigo.
" 89 -	41	15	5	Hæmoptysis.
" 90 -	57	33	2	Rupture. Defective vision.
" 91 -	50	30	1	Epilepsy. Phthisis.
" 92 -	56	16	0	Rupture.
" 93 -	41	22	10	Disease of heart.
" 94 -	57	36	0	Vertigo.
" 95 -	34	12	9	Phthisis.
" 96 -	56	27	6	Defective vision.
" 97 -	41	16	7	Paralysis.
" 98 -	37	14	2	Bright's disease.
" 99 -	48	14	10	Chronic rheumatism.

INJURIES received whilst in the Execution of their Duty, by the MEN belonging to the Dockyard, *Portsmouth*, during the Year 1869.

	Factory Men.	Shipwrights.	Joiners.	Riggers.	Painters.	Labourers.	Total Number of Cases.	Total Number of Days Hurt-List.
Wounds of:								
Scalp - - -	6	8	1	1	1	6	23	424
Eye - - -	6	5	-	-	-	1	12	660
Face - - -	2	5	-	-	-	-	7	70
Trunk - - -	1	-	-	-	-	-	1	7
Thigh - - -	-	1	-	-	-	-	1	7
Leg - - -	7	16	1	1	-	15	40	1,113
Foot - - -	1	9	-	-	-	7	17	380
Fore-arm - -	1	1	-	-	-	1	3	128
Hand - - -	38	47	3	10	-	28	126	2,615
Contusions of:								
Scalp - - -	2	4	-	-	-	3	9	275
Eye - - -	7	7	-	-	-	1	15	111
Face - - -	1	-	-	-	-	1	2	12
Trunk - - -	6	12	3	3	1	16	41	718
Thigh - - -	3	5	-	5	-	5	18	382
Leg - - -	5	7	1	-	-	10	23	597
Foot - - -	11	21	1	10	-	38	81	1,726
Upper arm - -	6	2	-	-	-	2	10	250
Fore-arm - -	4	3	-	-	-	2	9	166
Hand - - -	7	21	-	3	-	11	42	701
Fractures of:								
Ribs - - -	1	2	-	-	-	1	4	129
Arm (fore) - -	-	-	-	-	-	1	1	37
Hand - - -	1	-	1	-	-	1	3	73
Leg - - -	-	1	-	-	-	5	6	-
Skull - - -	-	-	-	-	-	1	1	-
Patella - - -	-	1	-	-	-	-	1	152
Clavicle - - -	1	-	-	-	-	-	1	36
Sprains of:								
Back - - -	9	12	1	6	-	12	40	991
Ankle - - -	6	18	-	3	-	10	32	630
Wrist - - -	4	6	-	2	-	3	15	229
Knee - - -	5	4	-	1	-	2	12	236
Shoulder - - -	7	1	-	-	-	1	9	120
Burns of:								
Arm - - -	2	2	-	1	-	-	5	49
Hand - - -	5	6	-	2	-	2	15	212
Eye - - -	7	2	-	-	-	1	10	118
Foot - - -	3	1	-	-	-	1	5	80
Leg - - -	1	-	-	-	-	-	1	7
Dislocations of:								
Ankle - - -	-	1	-	-	-	1	2	35
Clavicle - - -	-	-	-	-	-	1	1	30
Knee - - -	-	-	-	-	-	2	2	133
Hernia - - -	6	2	1	2	-	4	15	-

Appendix.

The average number of men employed daily in the dockyard during the year 1869 was 4,094. Comparing the number of injuries received, according to the preceding Table, by each class of workmen, with the total number of each class employed, they would appear to be obnoxious to the causes of such in the following ratio—viz., labourers, 21 ; riggers, 20 ; factory men, 17 ; shipwrights and other trades, 15 ; joiners, 5 ; painters, 4. No means of decreasing this liability (save extra care on the part of each individual) that would be compatible with the due performance of their work can, I believe, be devised. A protection for the eyes in the shape of spectacles has, I am told, more than once been supplied to the men ; but on each occasion the interference with the vision was too great to admit of their being worn. As a rule, the injuries which have been under my care in this dockyard, and at Woolwich, have been very amenable to treatment ; in a very small number, an unhealthy form of inflammation has been set up, attributable always to debility, the result of poverty, and its consequent evils.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, DEVONPORT,
DURING THE YEAR 1869.
BY
STAFF SURGEON W. McK. SAUNDERS, M.D.

Appendix.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, DEVONPORT,
During the Year 1869.
By Staff Surgeon W. McK. SAUNDERS, M.D.

It is customary in this and the other dockyards at home to keep two separate lists of the cases under treatment. The one—the Sick-list—embraces all cases of sickness, and all injuries which do not happen to the men during the regular discharge of their duties, either within the precincts of the yard, or when employed afloat. The men when so suffering are not entitled to receive any wages (though their time towards superannuation is allowed to count), nor are they entitled to attendance by the medical officers of the yard; but they are visited on the first day on which they report themselves, or as soon thereafter as possible, and from time to time afterwards, according to the nature of the case. To this rule, however, some exceptions are made; thus, all the yardcraft-men are entitled to attendance by the medical officers of the yard, and when the nature of the case demands it, are sent for treatment to the Royal Naval Hospital, being in all respects on a similar footing with the seamen employed in the service afloat. The officers and constables of the Metropolitan Police Force borne for duties in the yard, those who perform the duties of the water police, and those employed in carrying out the provisions of the Contagious Diseases Act in this town, come also in the same category. Moreover, assistance is always given to those artisans who, from poverty or from not possessing the advantages of sick-clubs, are unable to procure the necessary medical attendance. Lastly, the resident officers and their families are, if they so wish it, under the care of the medical officers of the yard.

The other list—the Hurt-List—embraces those artificers, &c., who meet with injuries in the ordinary course of their duties. By the regulations of the yard, every man who sustains an injury is to report it at the surgery immediately; the case is recorded, and if of a trivial nature, the hurt is dressed and the man returns to his duty; if of a nature to prevent him from following his employment, he is placed upon the hurt-list, and then receives half of his wages during the time he is absent from duty, together with the attendance by the yard medical officers; the fact of his injury being received on duty being vouched for by a note received from his leading-man, which is also countersigned by his foreman. If these injured men are able, they attend daily, or as often as may be necessary, at the surgery to have their hurts dressed; if the case requires rest, they are attended at their own homes, or if of a more serious character are sent for treatment to the Royal Naval Hospital.

Temporary assistance is also afforded to the officers and men of the service afloat, or to contractors' men when employed in the yard.

The district which the officers (non-resident) and artificers inhabit is a very extensive one; the men are generally supposed to live within an area of two miles from the yard gates or from the landing slip at Torpoint, a small village situated on the Cornish side of the Hamoaze; but such an arrangement is practically impossible, owing to the difficulty the men would experience in obtaining suitable lodgings within the prescribed area; so that, although the majority live in Devonport, Stoke, Morice Town, and Stonehouse, a considerable number live in Plymouth, Cawsand, Millbrook, Wilcove, Saltash, Ford, Tamerton, Egg, Buckland, and other villages situated on the northern and eastern confines of Plymouth.

From the difference in the amount of wages earned by the respective classes of workmen, it may be easily understood that all the men cannot equally possess themselves of the comforts of life, hence a great contrast may be noticed in the various homes. The residences seen in the older parts of Devonport, Plymouth, Stoke, and Stonehouse are not good; perhaps this remark bears more especially upon

upon Plymouth and Devonport, and within a short distance of the yard gates are to be found residences barely fit for human habitation. These houses present a striking contrast to those which have been built about Morice Town and the northern parts of Stoke; the houses in these latter districts possessing the benefits of good rooms, with plenty of light, and being constructed upon ample spaces of ground, that all-important cause of health, fresh air, is obtained.

In many of the newer parts of Plymouth, and in Ford, a small village built within recent years on the northern boundary of the parish of Stoke Damerel, the same advantages are possessed.

Considering what a great body of men is employed in this yard, it is striking to notice how temperate and provident they are, and it very rarely happens that sickness can be traced to dissipation and immorality.

The year cannot be considered to have been an unhealthy one, if it may be judged by the numbers who were absent from sickness, and it would bear a favourable comparison with others. The early months of the year, were characterised by mild weather, although stormy. May and June were cold and wet; afterwards there was a prolonged summer, followed by cold and inclement weather in November and December.

The average number of men employed in the yard during the year were 2,723, including officers. Their employments are various, and may tend to account for the prevalence amongst them of certain diseases; thus, for example, shipwrights, riggers, labourers, and yardcraft-men, whose duties necessarily involve more exposure to climatic influences, appear to suffer proportionately more from rheumatism and diseases affecting the respiratory organs, than other classes whose duties are carried on under more sheltered places. The following is the analysis of the Sick Book :—

SUMMARY of the Sick Book for the Year 1869.

D I S E A S E S.		Cases added to the List.	Discharged to Duty.	Sent to Hospital.	Died.	Superannuated.	Remain for Treatment.	Number of Days' Sickness from each Disease.
I. General Diseases, Section A.	Enteric Fever - - -	6	3	-	1	-	2	302
	Simple Continued Fever - -	2	2	-	-	-	-	20
	Catarrhus Epidemicus - -	11	8	-	-	1	2	259
	Erysipelas - - -	7	7	-	-	-	-	130
II. General Diseases, Section B.	Rheumatism - - -	90	84	1	-	2	3	1,670
	Gout - - -	10	7	-	-	-	3	258
	Phthisis Pulmonalis - -	11	5	1	4	-	1	398
	Cancer - - -	1	-	-	-	-	1	92
III. Diseases of the Nervous System and Organs of the Special Senses.	Apoplexy - - -	2	-	-	1	-	1	18
	Vertigo - - -	5	2	-	-	2	1	233
	Paralysis - - -	4	2	-	-	2	-	282
	Chorea - - -	1	-	-	-	1	-	71
	Epilepsy - - -	1	1	-	-	-	-	23
	Neuralgia - - -	17	14	-	-	2	1	350
	Insipientia - - -	1	-	-	-	1	-	30
	Ophthalmia - - -	9	9	-	-	-	-	142
	Iritis - - -	1	1	-	-	-	-	179
	Diseases of the Ear - -	2	-	-	-	1	1	70
	Diseases of the Nose -	1	1	-	-	-	-	7
IV. Diseases of the Organs of Circulation.	Diseases of the Heart :							
	Functional - - -	3	-	-	-	2	1	196
	Organic - - -	1	-	-	1	-	-	51
	Anæmia - - -	1	1	-	-	-	-	3
	Chlorosis - - -	1	1	-	-	-	-	24
	Varicose Veins - - -	1	-	-	-	1	-	54

Summary of the Sick Book for the Year 1869—continued.

DISEASES.		Cases added to the List.	Discharged to Duty.	Sent to Hospital.	Died.	Superannuated.	Remain for Treatment.	No. of Days' Sickness from each Disease.
V. Diseases of Absorbents, &c.	Inflamed Lymph Glands of Arm - - - -	1	1	-	-	-	-	54
VI. Diseases of the Organs of Respiration.	Diseases of the Larynx -	1	1	-	-	-	-	30
	Catarrh - - - -	270	259	-	-	-	9	2,146
	Bronchitis - - - -	25	21	-	1	1	2	365
	Pneumonia - - - -	5	3	-	2	-	-	116
	Pleurisy - - - -	3	2	-	1	-	-	63
VII. Diseases of the Digestive System.	Cynanche - - - -	45	44	-	-	-	1	434
	Odontalgia - - - -	1	1	-	-	-	-	2
	Dyspepsia - - - -	94	89	-	-	3	2	976
	Dysentery - - - -	1	-	-	1	-	-	6
	Diarrhoea - - - -	122	120	-	-	-	2	789
	Colic and Constipation -	19	17	-	1	-	1	173
	Hæmorrhoids - - - -	4	4	-	-	-	-	52
	Hernia - - - -	1	1	-	-	-	-	71
	Hepatitis - - - -	1	-	-	1	-	-	59
	Icterus - - - -	7	7	-	-	-	-	90
	Ascites - - - -	1	-	-	1	-	-	90
VIII. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	4	3	-	1	-	-	100
	Cystitis - - - -	2	2	-	-	-	-	106
	Parturition - - - -	1	1	-	-	-	-	41
	Dysmenorrhœa - - - -	1	1	-	-	-	-	3
	Amenorrhœa - - - -	2	2	-	-	-	-	24
	Stricture - - - -	3	3	-	-	-	-	28
	Epididymitis - - - -	2	2	-	-	-	-	25
IX. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess -	86	79	2	-	-	5	984
	Ulcer - - - -	6	5	-	-	1	-	236
	Eczema - - - -	1	1	-	-	-	-	13
	Urticaria - - - -	3	3	-	-	-	-	9
	Herpes - - - -	1	1	-	-	-	-	14
	Scabies - - - -	3	-	-	-	-	-	3
	Erythema - - - -	1	1	-	-	-	-	6
	Psoriasis - - - -	1	1	-	-	-	-	27
X. Diseases unclassified	Debility - - - -	2	-	-	-	1	1	186
Injuries which happened to Men not in the execution of their respective duties.	Wounds - - - -	3	3	-	-	-	-	66
	Fractures - - - -	2	2	-	-	-	-	57
	Dislocations - - - -	1	1	-	-	-	-	53
	Sprains - - - -	8	7	-	-	-	1	55
	Contusions - - - -	14	14	-	-	-	-	101
	Burns and Scalds - - -	2	2	-	-	-	-	27
	Injuries to the Eye - -	1	1	-	-	-	-	8
TOTALS - - -		940	853	9	16	21	41	12,539

This gives the average number of days' absence of each case from duty, 13.33 days. The per-centage of cases absent by sickness was 1.26 daily.

General Diseases, Section A.—The six cases of fever (enteric) which were placed upon the sick-list were well marked, and terminated fatally in one case, a girl *ætat.* 19, employed in the spinning establishment attached to the ropery. She was living at a house situated near the head of Albert-road, Morice Town, and died on the twenty-ninth day of her illness. The other cases occurred in the following districts and streets :—

Baker's Place, Richmond Walk	-	-	-	-	Devonport.
John's Lane, John's Street	-	-	-	-	Plymouth.
Providence Street	-	-	-	-	Ditto.
North Road	-	-	-	-	Ditto.
Benbow Street	-	-	-	-	Stoke.

The cases of influenza which occurred were protracted in their recovery, and in one case was followed by so great an amount of debility as to lead to the man's superannuation.

The other cases which are included under this heading do not require any special comment.

General Diseases, Section B.—Under this heading are included ninety cases of rheumatism, chiefly occurring in the first and second quarters of the year, which seasons were characterised by more than usual moisture.

Four of the cases of phthisis terminated fatally.

One case of cancer is returned, occurring as a large tumour, situated on the angle of the right side of the inferior maxilla, in a man aged fifty-nine, living at Saltash. He was superannuated.

Diseases of Nervous System and Organs of Special Sense.—One death occurred from diseases affecting these organs, which is returned under the heading Apoplexy. The case returned as *iritis* was a tedious case owing to its syphilitic origin.

Diseases of the Organs of Circulation.—One death is recorded as having happened from valvular disease of the heart, but no post-mortem examination took place by which to verify the diagnosis.

Diseases of the Respiratory Organs.—The cases of catarrh were chiefly recorded during the first and last quarters of the year, and for the most part happened amongst those classes of men alluded to previously as being more exposed to climatic influences.

One fatal case of acute bronchitis is returned.

Two fatal cases of pneumonia and one fatal case of pleurisy are returned under their respective headings.

Diseases of the Digestive Organs.—The cases of dyspepsia, ninety-four in number, require some notice; they principally happened amongst the young women who are employed in the hemp-spinning establishment attached to the ropery. It has been observed how subject they are to derangements of the digestive system, and there appears to be a remediable cause for these complaints. They eat their dinners in a large refectory, in which they have every convenience, but only half an hour is allowed them in which to eat their meal. With the English working classes the mid-day meal is too frequently the principal and only full meal eaten during the twenty-four hours, and it does not always consist of the most digestible articles of diet; meat puddings, suet puddings, and pork entering generally largely into its composition. Now these women have to eat their dinner hastily, and probably can only imperfectly masticate it; after which they proceed to the supervision of some very delicate machinery in rapid motion, which requires constant attention. The process of digestion must necessarily be interfered with, and this again reacts on the uterine functions. The above circumstances appear to form a sufficient reason for the prevalence of these derangements amongst the machine-girls. It is a matter for consideration whether the extra hour as at present enjoyed by the majority of the men for their mid-day meal, if allowed also to these women, would not be attended with benefit to themselves directly, and, by lessening the amount of sickness amongst them, ultimately to the service. This extra time would of course be made good by them in the evenings, instead of, as now, leaving work an hour before the majority of the men.

One fatal case of dysentery is returned; it occurred in the person of a machine-girl,

Appendix.

girl, æt. 23, living with her mother and family in a wretched room in Kerr-street, Devonport. The case, which at first appeared to be one of simple diarrhoea, took on a dysenteric form, and ran a rapid course, terminating fatally on the sixth day of the disease.

Eighty-one of the 122 cases of diarrhoea occurred during the quarter ending 30th September, which season of the year was characterised by very hot weather. Probably many of these cases may be referred to the unavoidable exposure of many of the men to the sun. But another cause may often be found for the prevalence of these diseases in these seasons of the year, viz., the too often unwholesome character of the food eaten. In seaside places a great article of consumption amongst the poorer classes is fish, which is hawked about the streets, and after a day's exposure to a hot sun is purchased by the poorer classes at a cheap rate in the evening. After a hard afternoon's work a hearty meal of fish may be indulged in, but which too surely causes its deleterious effects to be experienced before sunrise the next morning. In seaside places are other articles of favourite consumption amongst the working classes, for their evening meal, shell-fish of various kinds, mussels, limpets, and cockles, with a considerable amount of vinegar, salted herrings and other fish preserved, and purchased in the hot, foul hucksters' shops; these are certainly fruitful sources of diarrhoea. Where large bodies of people are congregated together in great establishments, more especially if those people consist of the working classes, it may often be noticed in the seasons of the year when these complaints are rife that the most frequent applications for remedies are made early in the morning, and within an hour after the mid-day meal. The latter being large and out of proportion to the others eaten during the day is in Summer and Autumn frequently supplemented by a fair amount of cheap and unripe fruit. In these cases the mischief is pointed out at once by the sickness, nausea, gripping pains, and foul tongue, and the natural remedies to assist nature are also indicated.

Frequently a stimulating emetic afforded almost instant relief. Castor oil in small doses, guarded by a few drops of laudanum and some carminative, or the compound rhubarb powder, with the compound tincture of rhubarb, assisted nature in her efforts to expel the irritating bodies.

Under the heading Colic and Constipation, one fatal case is recorded, in the person of a hired labourer, æt. 28, who died after an illness of forty days. No post-mortem examination was made in this case.

The fatal case of hepatitis occurred in the person of a labourer, æt. 48, living at Ford. The disease terminated fatally in fifty-nine days, but no post-mortem examination took place by which to verify the diagnosis.

Under the heading Ascites, one case is recorded, terminating fatally, after a protracted illness of ninety days; complicated with phthisis and Bright's disease.

Diseases of the Urinary Organs and Generative System.—One death was entered as due to acute Bright's disease; it occurred in the person of a hired wheelwright living in a place named Holman's Buildings, near the dockyard. It terminated fatally in five days. His age was forty.

There are no other cases classed under this heading which require any special comment.

Diseases of the Cutaneous System, &c.—Included under which are eighty-six cases of phlegmon and abscess. One case, which was an abscess accompanied with periosteal inflammation, occurred in a boy, æt. 18, serving on board the Trusty tugboat. The boy had been exposed to much wet and exposure during the month of January, and had often struck his leg, though not severely. He presented himself, suffering from acute pain and redness over the left shin, and a collection of matter. The nocturnal exacerbation of the pain, and its severity, pointed to its periosteal character, and he was transferred to the Royal Naval Hospital.

A police constable, æt. 45, was transferred to the Royal Naval Hospital, suffering from an extreme carbuncle in the nape of his neck.

Three cases of scabies were transferred to the Royal Naval Hospital; they were men serving on board one of the dockyard lighters employed in transporting stores from one to the other Home Naval Establishments. To prevent the spread of the disease they were transferred to hospital.

The other diseases under this heading require no special notice.

Diseases Unclassed.—Under which are included two cases of debility, but which do not need any special notice.

We now come to the consideration of the Hurt Book.

ANALYSIS of the HURT BOOK during the Year 1869.

Characters of the Injury.	Regions of the Body Injured.	Number of Cases Registered.	Placed on the Hurt List.	Discharged to Duty.	Sent to the Royal Naval Hospital.	Dead.	Superannuated.	Remain for Treatment.
Wounds, Incised - -	Of the head and neck -	21	1	1	-	-	-	-
	" trunk - -	-	-	-	-	-	-	-
	" upper extremities -	539	40	39	-	-	-	1
	" lower ditto -	45	25	23	-	-	-	2
Wounds, Lacerated -	Of the head and neck -	2	2	2	-	-	-	-
	" trunk - -	-	-	-	-	-	-	-
	" upper extremities -	61	12	12	-	-	-	-
	" lower ditto -	-	-	-	-	-	-	-
Wounds, Contused -	Of the head and neck -	190	83	80	3	-	-	-
	" trunk - -	1	1	1	-	-	-	-
	" upper extremities -	473	75	74	1	-	-	-
	" lower ditto -	247	47	44	-	-	-	3
Wounds, Punctured -	Of the head and neck -	6	-	-	-	-	-	-
	" trunk - -	1	-	-	-	-	-	-
	" upper extremities -	172	25	25	-	-	-	-
	" lower ditto -	12	7	7	-	-	-	-
Fractures - - -	Of the skull - - -	3	3	-	-	3	-	-
	" scapula - - -	1	1	-	1	-	-	-
	" forearm - - -	2	2	2	-	-	-	-
	" digits, upper extre- mities. - - -	4	4	3	1	-	-	-
	" tibia and fibula -	3	3	2	2	-	-	1
	" digits, lower extre- mity. - - -	2	2	2	-	-	-	-
Sprains - - -	Of the head and neck -	-	-	-	-	-	-	-
	" trunk - - -	43	28	28	-	-	-	-
	" upper extremities -	42	11	11	-	-	-	-
	" lower ditto -	35	18	18	-	-	-	-
Dialocations - - -	Of the radius and ulna back- wards. - - -	-	1	-	-	-	-	1
Bursitis - - -	Inflammation of the right bursa patella, caused by kneeling when planing decks. - - -	1	1	1	-	-	-	-
Contusions - - -	Of the head and neck -	64	12	12	-	-	-	-
	" trunk - - -	48	14	12	1	-	-	1
	" upper extremities -	362	62	58	-	-	-	4
	" lower ditto -	279	105	101	1	-	-	3
Burns and Scalds -	Of the head and neck -	24	9	8	1	-	-	-
	" trunk - - -	-	-	-	-	-	-	-
	" upper extremities -	43	4	4	-	-	-	-
	" lower ditto -	5	2	2	-	-	-	-

ANALYSIS of the Hurt Book during the Year 1869—*continued.*

Characters of the Injury.	Regions of the Body Injured.	Number of Cases Registered.	Placed on the Hurt List.	Discharged to Duty.	Sent to the Royal Naval Hospital.	Died.	Superannuated.	Remain for Treatment.
Injuries to the Eye	By burns with hot scales of iron.	41	13	13	-	-	-	-
	By chips of metal, dust, lime, and entry of small foreign particles.	100	18	18	-	-	-	-
	By direct contusion with heavy wedges and other large bodies.	63	18	14	4	-	-	-
Hernia	Right inguinal	4	2	2	-	-	-	-
	Left ditto	1	-	-	-	-	-	-
	Both sides	1	-	-	-	-	-	-
TOTALS		2,942	651	617	15	3	-	16

The total number of days' absence was 7,352, and the daily average percentage of loss to the service from hurts during the period was '74 of the numbers employed. The average numbers of men employed, and the number of hurts registered, is given here for the sake of comparison with the two preceding years:—

YEAR.	Number of Men employed. Average.	Number of Cases of Injuries Registered.
1867	2,860	6,505
1868	2,509	3,394
1869	2,723	2,942

It will be seen therefore that this year holds a rather favourable comparison with its two predecessors, more especially when it is remembered that a considerable amount of dangerous work, viz., ripping up ships, was performed by hired men entered especially for the occasion, who often come in after long periods of compulsory idleness, and are not so handy probably with their tools. It has frequently been noticed how greatly the numbers of accidents have increased coincidently with fresh entries of artificers, and how the numbers of injuries diminished, apparently as the newer men became more accustomed to their duties; as an example on the day on which Her Majesty's ship late *Britannia* was commenced to be broken up, as many as twenty-five cases of injury were recorded at the surgery.

As a rule most accidents may be traced to absolutely unforeseen causes, or to individual want of forethought; and, with few exceptions, it is difficult to suggest any plan by which to prevent them. Great care is taken in the protection of machinery, and the constant supervision of all dangerous work by carefully selected and vigilant leading men, with the great care bestowed in the erection of stages, reduces the numbers of fatal and even of severe accidents to a minimum.

One suggestion may be offered in connection with the numbers of contusions and contused wounds of the scalp; the great majority of these wounds and injuries are caused by the fall of wedges and other matters from stages, and perhaps an arrangement might be adopted with some diminution of these dangers

dangers by the placing under stages, more especially the smaller stages, a stout netting in which to catch the falling bodies. By securing the netting to the shores for instance, where a ship is in dry dock, to the sides of the ship, and the sides of the dock, the possibility of fatal accidents by falls from the stages might be reduced to a minimum.

The difficulty of healing adze wounds has often been noticed, but for which, on reflection, there are probably several reasons. As a rule they are situated on the shin and other scantily covered parts; but, in addition to this, they are usually inflicted with great violence, and accompanied by a certain amount of contusion of the neighbouring parts; and though they are classed as incised wounds, might with more propriety come under the category, contused wounds. But another fact may be borne in mind, viz., the want of water and cleanliness too frequently to be noticed amongst the lower classes. The skin, kept in a constant state of filth, must necessarily have its functions greatly interfered with, and this may also assist us in finding a solution for this difficulty. The enforcement of cleanliness would probably greatly tend to the shortening of the numbers of days' absence from duty, on account of this class of injury. The more general employment of antiseptic dressings has affected beneficially the healing of these and other wounds.

The greater introduction of metal into the construction of ships accounts for the large number of injuries happening to the eye. Amongst smiths, and now amongst shipwrights, a common injury is that of chips of metal wounding and adhering to the cornea; if speedily attended to, a steady hand and a Walton's spud easily removes the difficulty. But it often happens that they are not felt at the time of infliction of the injury, and pass unnoticed until the following day, by which time some degree of inflammatory action calls the sufferer's attention to the nature of the case; greater difficulty is experienced in the removal of the offending body; but patience will overcome it. In the recent cases the application of a drop of castor oil to the torn surface of the cornea affords generally immediate relief; but in those in which any inflammatory action has been set up, warm poppy fomentations diligently applied after the removal of the foreign body, and protecting the eye from a too bright light, generally enabled the man to return to his duty in from two to three days.

Blacksmiths frequently suffer from burns of the cornea caused by hot scales of iron flying off from the forgings; these cases are somewhat more troublesome; in these cases, also, the application of castor oil relieved the immediate smarting, and warm anodyne fomentations completed the cure.

In these accidents, and in that class due to the adhering of foreign bodies, something might be done, by compelling men when so engaged to wear gauze goggles.

As regards fatal accidents, three were recorded as due to fracture of the skull, and occurred in the yard; one death occurred in the Royal Naval Hospital, the result of injury received in the dockyard.

On the 1st of March a young shipwright apprentice was killed when working on board Her Majesty's gunboat Growler, fitting out at Keyham Yard. Some repairs had been executed to the funnel, which was being replaced, and accidentally slipped from its gear, falling upon the lad's head and crushing his skull; instantaneous death resulted. In this case no blame could be traced to any party.

On the 22nd March a shipwright *etat.* thirty-six, employed on board Her Majesty's ship Valorous, undergoing repairs in dry dock at Keyham, was working at a portion of the ship's bulwarks; when delivering a blow with his hammer he over-reached himself and fell to the bottom of the dock, a depth of over thirty feet; alighting on his vertex he sustained a severe fracture of the base of the skull, causing instantaneous death; in this case no blame could be attached to anyone.

On the 1st April a labourer was employed on a stage slung over the stern of Her Majesty's ship Prince of Wales, now Britannia, when by some carelessness one of the guys of the stage was cast loose; it tilted up, throwing the unfortunate man heavily into the bottom of the dry dock in which the ship was, in Devonport Yard. He sustained a severe fracture of the base of the skull, and death was instantaneous. In this case a man was ordered to let go a particular rope; there were two or three made fast to the same ring-bolt, and, he stupidly cast off that one which secured one end of the stage, and hence the accident; after due inquiry into the case, the culpable party was suspended for a time.

Appendix.

On the 28th May one of the machine girls *ætat.* eighteen, had her right hand caught in the spinning machinery; all the fingers were more or less lacerated, and there was a compound fracture of the fore-finger. She was sent to the Royal Naval Hospital; tetanus supervened, which terminated fatally on the 6th June.

As a proof of the rarity of this disease, this is the only case of tetanus noted during these three years, viz., 1867, 1868 and 1869, although the total number of accidents which actually came under notice in that period amounted to no fewer than 9,841.

There are three suggestions which offer themselves as being likely to diminish the risk of certain classes of accidents.

- (i) The fitting below all stages a strong rope netting to catch any falling bodies.
- (ii) The providing shipwrights, when employed in using the adze, and also labourers when employed in lifting about heavy weights, with stout leathern pads to be buckled over the shins, which might greatly diminish the numbers of wounds and contusions sustained by these classes of men.
- (iii) The providing men when employed in rivetting, in chipping metal, or smiths at the forges, with fine wire-gauze goggles to diminish the risk of accidents to the eye.

A Tabulated Statement of the deaths which occurred during the year amongst those cases actually put on the list during that period is herewith appended, and this is followed by a list of the men who were discharged the service on pensions. The list is a long one, but in the year 1869 a gradual reduction was being carried out in the numbers employed, and care was taken to pick out all those men from their respective departments who were considered to be physically incapacitated for the proper performance of their duties.

A LIST of DEATHS which occurred during this Period.

Parties' Initials.	Ages.	Qualities.	Date when placed on the List.	Date of Death.	DISEASE OR INJURY.
G. P. -	51	Shipwright -	4 Jan. -	14 Jan. -	Morbus cordis? this man went out suffering from a catarrh, with no chest symptoms, but met with severe domestic affliction, and died suddenly. There was no <i>post-mortem</i> examination.
J. S. -	30	Hired labourer -	22 „ -	27 „ -	Acute pneumonia.
J. T. -	15	Shipwright apprentice.	1 Mar. -	1 Mar. -	Fracture of the skull, caused by a gunboat's funnel falling on him.
W. T. -	46	Labourer -	13 „ -	13 „ -	Apoplexy? died in the yard after eating a hearty meal, and moving about some heavy weights. No <i>post-mortem</i> examination was made, but the symptoms resembled apoplexy.
N. M. -	36	Shipwright -	22 „ -	22 „ -	Fracture of the skull, by falling into a dry dock.
G. S. -	23	Machinist -	27 „ -	1 Apr. -	Dysenteric diarrhoea of six days.
W. W. -	40	Hired wheelwright.	30 „ -	3 „ -	Acute Bright's disease.
J. T. -	36	Labourer -	1 Apr. -	1 „ -	Fracture of skull, by falling into a dry dock.
S. N. -	48	- ditto -	14 „ -	11 June -	Hepatitis.
H. K. -	46	- ditto -	15 „ -	20 Apr. -	Acute pneumonia; six days' illness.
T. N. -	28	Hired labourer -	8 June -	17 July -	Constipation.
R. T. -	50	Labourer -	30 „ -	20 „ -	Acute bronchitis.
W. N. -	29	- ditto -	9 July -	11 Oct. -	Phthisis.
C. W. -	48	- ditto -	30 Aug. -	30 Sept. -	Phthisis.
J. G. -	40	- ditto -	30 „ -	27 Nov. -	Ascites of long standing, complicated with phthisis.
W. C. -	36	- ditto -	6 Sept. -	10 Sept. -	Phthisis and hæmoptysis.
G. B. -	28	Smith -	29 „ -	23 Oct. -	Phthisis.
J. R. -	46	Leading man of shipwrights.	9 Oct. -	21 „ -	Acute pleurisy; 13 days' illness.
A. T. -	19	Machinist -	18 „ -	15 Nov. -	Enteric fever.

A LIST of OFFICERS and MEN Superannuated during the Year 1869.

Date of Survey.	Cases.	Age.	Qualities.	Service.	Date of being placed on the List.	DISEASES OR INJURIES.
4 Jan. -	Case 1 -	45	Labourer -	Yrs. mo. 13 7	1868 : 14 Sept. -	Dropsy and disease of liver.
" -	" 2 -	44	Shipwright -	18 0	12 Oct. -	Phthisis.
" -	" 3 -	51	Sawyer -	28 9	Not on list -	Bronchitis of long standing.
1 Feb. -	" 4 -	57	Shipwright -	29 6	- ditto. -	Defective vision and rheumatism.
1 Mar. -	" 5 -	53	Sawyer -	25 4	1869 : 2 Feb. -	Lumbago and generally worn out.
" -	" 6 -	50	Smith -	15 2	Not on list -	Generally worn out, and suffering from a crippled state of the right fore and middle fingers, the result of an old injury.
" -	" 7 -	44	Joiner -	23 1	12 Jan. -	Sciatica and rheumatism.
" -	" 8 -	55	Rigger -	36 2	Not on list -	Generally worn out.
5 Apr. -	" 9 -	55	Smith -	29 0	- ditto -	Chronic bronchitis.
" -	" 10 -	57	Shipwright -	29 0	- ditto -	Defective vision and rheumatism.
" -	" 11 -	54	Master sailmaker -	32 7	12 Mar. -	Rheumatism and nervous debility of long standing.
" -	" 12 -	44	Shipwright -	22 0	1 " -	Vertigo and chronic rheumatism.
3 May -	" 13 -	59	- ditto -	38 3	Not on list -	Varicose veins and ulcers of left leg.
" -	" 14 -	58	- ditto -	35 0	- ditto -	Defective vision and generally worn out.
" -	" 15 -	46	Leading man of shipwrights.	22 4	13 Apr. -	General debility of long standing.
7 June -	" 16 -	47	Writer -	15 2	24 May -	Paralysis.
" -	" 17 -	53	Shipwright -	29 1	27 Apr. -	Deafness of long standing.
" -	" 18 -	41	Messenger -	22 7	12 May -	Varicose veins of left thigh and leg.
" -	" 19 -	49	Rigger -	30 4	1 Feb. -	Paralysis of both lower extremities.
5 July -	" 20 -	48	Smith -	23 3	Not on list -	Albuminurea of long standing.
" -	" 21 -	59	Coxswain of harbour-master's boat.	39 1	- ditto -	Rheumatism and generally worn by long servitude.
2 Aug. -	" 22 -	34	Chief draftsman	13 5	29 Mar. -	Paralysis of the left lower extremity.
" -	" 23 -	56	Smith -	35 0	Not on list -	Debility and worn out.
" -	" 24 -	53	- ditto -	32 5	- ditto -	Chronic dyspepsia and debility.
" -	" 25 -	47	Shipwright -	24 3	9 June -	Morbus cordis.
" -	" 26 -	59	- ditto -	38 3	7 " -	Morbus cordis.
" -	" 27 -	50	Smith -	27 8	17 July -	Chronic bronchitis, and generally worn by the arduous nature of his duties at the steam hammers.

A List of Officers and Men Superannuated during the Year 1869—*continued.*

Date of Survey.	Cases.	Age.	Qualities.	Service.	Date of being placed on the List.	DISEASES OR INJURIES.
2 Aug. -	Case 28 -	38	Plumber - -	<i>Yrs. mo.</i> 14 6	1869 : 21 July -	Oxalurea and hernia.
6 Sept. -	" 29 -	51	Hired labourer -	14 4	Not on list -	Chronic rheumatism.
" -	" 30 -	53	Painter - -	27 5	- ditto -	Chronic bronchitis.
" -	" 31 -	55	Smith - -	32 8	- ditto -	Defective vision.
" -	" 32 -	58	- ditto - -	35 0	24 Aug. -	Rheumatism and varicose veins.
" -	" 33 -	51	- ditto - -	29 0	27 " -	Chronic dyspepsia and debility.
" -	" 34 -	48	Shipwright -	24 5	26 July -	Vertigo and deafness.
" -	" 35 -	58	Smith - -	29 0	16 Aug. -	Rheumatism and generally worn out; suffers from a crippled state of the right fore-finger, result of old injuries.
" -	" 36 -	56	- ditto - -	32 7	Not on list -	Defective vision.
" -	" 37 -	53	Painter - -	23 1	24 Aug. -	Chronic dyspepsia.
" -	" 38 -	52	Shipwright -	29 5	3 " -	Vertigo.
" -	" 39 -	29	Hired labourer -	10 6	7 July -	Phthisis.
4 Oct. -	" 40 -	58	Smith - -	36 5	Not on list -	Defective vision and generally worn out.
" -	" 41 -	54	- ditto - -	32 7	13 Sept. -	Chronic rheumatism.
1 Nov. -	" 42 -	45	Leading man of shipwrights.	23 6	9 Oct. -	Chorea and general nervous debility.
" -	" 43 -	44	Mate, yard craft	23 5	Not on list -	Defective vision and rheumatism.
" -	" 44 -	54	Rigger - -	28 11	- ditto -	Chronic rheumatism.
" -	" 45 -	46	Smith - -	22 10	- ditto -	Defective vision.
" -	" 46 -	56	Plumber - -	35 4	- ditto -	Double inguinal hernia.
6 Dec. -	" 47 -	53	A. B., " Scotia "	10 5	- ditto -	Rheumatism.
" -	" 48 -	54	Plumber - -	35 8	- ditto -	Varicose veins and ulcers.
" -	" 49 -	59	Smith - -	35 0	- ditto -	Generally worn out by age and service.
" -	" 50 -	53	- ditto - -	30 0	- ditto -	Crippled left knee-joint, and lameness of right leg by injuries received on duty.
" -	" 51 -	56	- ditto - -	34 0	- ditto -	Defective vision and varicose veins.
" -	" 52 -	59	Shipwright -	29 8	1 Oct. -	Malignant tumour of right side ; inferior maxilla.
" -	" 53 -	41	- ditto - -	11 4	12 Aug. -	Rheumatic gout of long standing.
" -	" 54 -	53	Smith - -	28 4	1 Nov. -	Chronic rheumatism.
" -	" 55 -	49	Rigger - -	30 10	12 Oct. -	Debility following an attack of apoplexy.
" -	" 56 -	53	Joiner - -	26 6	22 Nov. -	Scleritis affecting both thighs.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD AT KEYHAM,
FOR THE YEAR 1869,
BY
ASSISTANT SURGEON GEORGE MAIR, M.D.

**NOSOLOGICAL STATEMENT of the DISEASES and INJURIES put on the SICK and HURT
LISTS of Her Majesty's Dockyard at *Keyham*, during the Year 1869.**

DISEASES, &c.	Added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Remaining.
General Diseases, Section A.:						
Varicella - - - - -	1	1	-	-	-	-
Continued Fever - - - - -	6	6	-	-	-	-
Ague - - - - -	2	2	-	-	-	-
Erysipelas - - - - -	3	3	-	-	-	-
General Diseases, Section B.:						
Rheumatism - - - - -	34	31	-	-	-	3
Syphilis, Secondary - - - - -	1	-	-	-	1	-
Phthisis - - - - -	8	4	-	2	-	2
Anasarca - - - - -	1	1	-	-	-	-
Diseases of the Nervous System and Organs of Special Sense:						
Paralysis - - - - -	1	-	-	-	-	1
Neuralgia - - - - -	2	2	-	-	-	-
Insanity - - - - -	1	-	-	-	-	1
Melancholia - - - - -	1	1	-	-	-	-
Ophthalmia - - - - -	16	16	-	-	-	-
Diseases of Circulatory System:						
Heart Disease, Organic - - - - -	1	-	-	1	-	-
Diseases of the Respiratory System:						
Catarrh - - - - -	86	81	-	-	-	5
Bronchitis - - - - -	4	4	-	-	-	-
Pneumonia - - - - -	2	2	-	-	-	-
Hæmoptysis - - - - -	2	2	-	-	-	-

NOSOLOGICAL Statement of the Diseases and Injuries, &c.—*continued.*

D I S E A S E S, &c.	Added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Remaining.
Diseases of Digestive System :						
Cynanche - - - - -	16	16	-	-	-	-
Dyspepsia, &c. - - - - -	84	83	-	-	-	1
Hernia - - - - -	2	1	-	-	1	-
Diseases of Urinary and Generative Systems :						
Nephritis - - - - -	1	1	-	-	-	-
Gonorrhœa - - - - -	1	1	-	-	-	-
Stricture - - - - -	2	2	-	-	-	-
Diseases of the Cellular Tissue and Cutaneous System :						
Phlegmon - - - - -	26	25	-	-	-	1
Ulcer - - - - -	1	1	-	-	-	-
Tumour - - - - -	1	1	-	-	-	-
Diseases of the Skin - - - - -	3	3	-	-	-	-
Unclassed :						
Debility - - - - -	1	1	-	-	-	-
Wounds and Injuries - - - - -	266	249	6	-	-	11
TOTALS - - -	576	540	6	3	2	25

**TABULAR STATEMENT of the INJURIES sustained at Her Majesty's Dockyard, at
KEYHAM, during the Year 1869.**

Injuries, arranged according to the Regions and Organs of the Body in which they occurred.	Number of Cases entered in Hurt Book.	Put on the Hurt List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Remaining.	Total Number of Injuries of each Region.
Injuries of the Head and Neck :—								
Wounds - - - - -	53	10	9	1	-	-	-	89
Contusions - - - - -	23	2	2	-	-	-	-	
Burns - - - - -	13	1	1	-	-	-	-	
Eye, and its Appendages :—								
Wounds - - - - -	19	3	2	1	-	-	-	154
Contusions - - - - -	49	8	6	2	-	-	-	
Burns - - - - -	34	2	2	-	-	-	-	
Foreign Bodies - - - - -	52	8	8	-	-	-	-	
Trunk :—								
Sprains - - - - -	15	7	7	-	-	-	-	33
Contusions - - - - -	18	6	6	-	-	-	-	
Upper Extremity :—								
Wounds - - - - -	539	79	75	-	-	-	4	788
Contusions - - - - -	147	42	42	-	-	-	-	
Sprains - - - - -	26	7	7	-	-	-	-	
Fractures - - - - -	4	4	4	-	-	-	-	
Burns - - - - -	72	14	14	-	-	-	-	
Lower Extremity :—								
Wounds - - - - -	98	30	28	1	-	-	1	252
Contusions - - - - -	121	27	25	-	-	-	2	
Sprains - - - - -	17	10	7	-	-	-	3	
Fractures - - - - -	1	1	-	1	-	-	-	
Burns - - - - -	15	5	4	-	-	-	-	
TOTALS - - -	1,316	266	249	6	-	-	11	1,316

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD AT KEYHAM,
For the Year 1869,
By Assistant Surgeon GEORGE MAIR, M.D.

THE prevailing causes of sickness during the year have been catarrh, derangements of the digestive organs, and rheumatism. The greater number of cases of catarrh, and also of rheumatism, occurred during the Lady and Christmas quarters, when the weather here is wet, cold, and changeable. None of the diseases classed as zymotic appeared in the neighbourhood during the year in an epidemic form. Under the head of "General Diseases, Section A.," one case of varicella, six cases of simple continued fever, two of ague, and three of erysipelas were put on the sick-list; the cases of continued fever gave an average days' sickness of 23.6.

Under the head of "General Diseases, Section B.," thirty-four cases of rheumatism were registered, and eight cases of phthisis, two of which latter died during the Christmas quarter after the usual protracted illness. One case of secondary syphilis is reported as invalided; that is, the man was discharged from the yard as unfit for further service. One death is recorded from organic disease of the heart during the Michaelmas quarter; the man, who was only twenty years of age, had suffered for some time from debility and palpitation; of diseases of the respiratory system, eighty-six cases of catarrh were put on the register, with an average of eight days' sickness; four cases of bronchitis, two of pneumonia, and two of hæmoptysis are also recorded.

Of diseases of the digestive system, sixteen cases of cynanche were put on the list, and eighty-four cases of dyspepsia, diarrhoea, and constipation. Two cases of hernia were put on the list, both cases of long standing, and one of them, a labourer, forty-four years of age, was discharged from the yard as unserviceable.

Only four cases of diseases of the urinary and generative systems were entered during the year, one case of nephritis, one of gonorrhoea, and two cases of stricture of the urethra.

Of diseases of the cellular tissue and cutaneous system, twenty-six cases have been entered under the head of phlegmon, one case of ulcer, one tumour, one case of onychia, and one case each of herpes and eczema.

Under the head of wounds and injuries, one thousand three hundred and sixteen cases were treated at the surgery during the year, of which two hundred and sixty-six were put on the hurt-list, six of the latter having been sent to hospital.

Of the six men sent to hospital, the first was a labourer, who sustained severe contused wounds of the scalp by falling into the engine-room of the "Lord Clyde;" he died of erysipelas fourteen days after his admission to hospital. Three were cases of injury to the eye, one a wound of the cornea with effusion into the anterior chamber, produced by a blow from a spanner, and two were severe contusions of the eyeball, from blows with pieces of iron. The other two cases were injuries of the lower extremity, the first severe contused wounds of both legs, produced by falling down a stokehold; the other was a fracture of the tibia, produced by a fall from a plank leading from a ship to the quay.

Appendix.

The injuries sustained at the steam factory at Keyham differ in character from those at the other dockyards, where a large proportion of the men employed are shipwrights, as although a considerable number of shipwrights are employed here, their injuries are recorded at Devonport. The only workmen whose injuries are recorded in these returns are fitters, engine smiths, boiler makers, brass and iron foundrymen, and copper-smiths, and a few millwrights and pattern makers, with the labourers and boys employed in the several departments, so that there are very few simple incised wounds coming under treatment, the wounds for the most part being contused or lacerated, and in many cases also, when produced by rough edges of iron or copper, poisoned in addition, which accounts for the length of time they are frequently under treatment.

Of the injuries recorded here the first in point of frequency are injuries of the upper extremity, consisting chiefly of lacerated and contused wounds of the hand, involving in a considerable proportion of cases the loss of a nail; these injuries are caused usually either by a blow with a hammer, by being pinched by machinery, or by pieces of metal falling on them. Burns of the hand and fore-arm, either with hot metal, or jets of steam are frequent, but seldom severe, as shown by the fact, that of seventy-two cases of this description occurring during the year only fourteen were sufficiently severe to prevent the men from continuing at work. The next class of injury in point of frequency is that of the lower extremity; contusions of the foot, in many cases involving the loss of the nail of either the great or second toe, from the foot being crushed under a heavy weight. There is a peculiarity observable in the cases of contused wounds and simple abrasions of the leg, which would lead to the conclusion that some men are more liable to this form of accident than others, for in a considerable proportion of the men who present themselves with this injury, the wound or abrasion is found either upon or beside the cicatrix of an old wound of a similar character. The most severe cases of this kind usually occur amongst men working in the engine rooms and stokeholds of ships, where the flooring is composed of moveable iron plates, some of which, when the ship is undergoing repair, are usually not in position; the men, passing along carelessly, fall through the aperture thus left, and produce a contused wound of the leg, in many cases extending to the periosteum of the tibia by striking against the sharp edge of one or other of the iron plates which form the sides of the opening. Burns of this region are chiefly produced by sparks of molten metal, and a greater proportion of them are more severe than in the case of the upper extremity, as out of a total of fifteen cases five were unable to continue at work.

Of injuries of the eye and its appendages, the form of most frequent occurrence is the intrusion of foreign bodies under the eyelids, or on the surface of the eye. Fifty-two cases of this form of injury presented themselves at the surgery during the year, eight of which were put on the hurt-list. The foreign bodies usually met with in this position are dust, particles of iron rust, and sparks from the anvil, usually imbedded in the surface of the cornea or conjunctiva; drops of paint, whitewash, and plaster, mostly found free under the eyelids; when brought to the surgery immediately, the removal of these bodies is attended with little difficulty, and seldom followed by any unpleasant consequences; when, however, as sometimes happens, the man does not present himself till the following morning, inflammation having by that time set in, the removal of the foreign body is more difficult on account of the irritability of the eye, and conjunctivitis usually continues for several days. Contusions of the eyelids, and about the margins of the orbit are frequent, but seldom severe. The burns in this region stand next in point of frequency to those of the upper extremity. Burns affecting the globe of the eye are most frequently produced by sparks from the anvil, and those of the lids by molten metal; they are usually burns of the first degree, not leaving the continually contracting cicatrix characteristic of the severer forms of burn. One penetrating wound of the eyeball occurred during the year; but the most of the wounds recorded in this region have been wounds of the eyebrow and eyelids, near the margins of the orbit.

The injuries of the head are usually caused by blows, or falls, or articles dropped

dropped from above by men at work. The burns in this region are mostly produced by sparks of hot metal, and are seldom of so serious a character as to prevent the man from continuing his work.

Appendix.
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The injuries of the trunk have this year been confined to sprains of the back and contusions about the body. The sprains of the loins are produced by lifting heavy weights, and occasionally by a man using a heavy hammer missing a blow; there is rarely any swelling or discoloration to be observed in these cases, as the sprain is generally very slight, but the men complain of pain in bending the spine, and usually walk with difficulty with one or both hands placed on the loins for support; a few days' rest, with the support of a bandage, generally suffices for a cure.

The most of the accidents which occur here, so far as my experience extends, are due to carelessness on the part of the men themselves. It might be supposed that the injuries of the eye might be in a great measure prevented by the use of preserves; this form of protection I find is worn only by one man employed at the works, whose occupation is grinding iron and steel on a dry stone in rapid revolution. Amongst the blacksmiths, boilermakers, and engine-fitters this form of protection is never used, it not being the custom in their respective trades; the reason given by the men for not using them is, that they add to the danger; on account of the occasional heavy blows they receive in this region, the preserve is liable to be broken and part of it forced into the eye, forming a more serious injury than the contusion which is produced in the absence of such protection.

One man has been superannuated during the year; there are only thirty men entitled to a superannuation allowance out of nearly 900 men employed at Keyham.

TABULAR STATEMENT of Men Superannuated at *Keyham* during the year 1869.

Date.	Initials.	Age.	Quality.	Length of Service.	REMARKS.
5 July -	W. M. -	54	Established millwright.	<i>Yrs. Mos.</i> 25 6	Ruptured and generally worn out by rheumatism and gout. The left thumb and right forefinger partially disabled by injuries received in the execution of his duties.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD, PEMBROKE,
BETWEEN THE
1st OF JANUARY AND THE 31st OF DECEMBER 1869,
BY
STAFF SURGEON W. R. DALTON.

MEDICAL and SURGICAL REPORT of Her Majesty's DOCKYARD,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
I. General Diseases, Section A.	Scarlet Fever - - -	-	5	2	-	-	-	3
	Enteric Fever - - -	-	1	1	-	-	-	-
	Simple Continued Fever - -	-	4	4	-	-	-	-
	Ague - - - - -	-	4	4	-	-	-	-
	Mumps - - - - -	-	2	2	-	-	-	-
	Febricula - - - - -	-	9	8	-	-	-	1
	Erysipelas - - - - -	-	2	1	-	1	-	-
II. General Diseases, Section B.	Rheumatism - - - -	2	54	46	-	-	3	7
	Gout - - - - -	-	14	14	-	-	-	-
	Syphilis, Secondary - - -	-	1	-	-	-	-	1
	Scrofula - - - - -	-	3	3	-	-	-	-
	Phthisis Pulmonalis - - -	2	6	1	-	5	1	1
	Scurvy - - - - -	1	-	1	-	-	-	-
	Anasarca - - - - -	1	-	1	-	-	-	-
III. Diseases of the Nervous System and Organs of the Special Senses	Purpura - - - - -	-	1	1	-	-	-	-
	Paralysis - - - - -	-	1	-	-	1	-	-
	Vertigo - - - - -	1	1	1	-	-	1	-
	Epilepsy - - - - -	-	1	1	-	-	-	-
	Neuralgia - - - - -	-	3	3	-	-	-	-
	Insanity - - - - -	-	1	-	-	-	1	-
	Ophthalmia - - - - -	-	4	4	-	-	-	-
IV. Diseases of the Circulatory System.	Diseases of the Ear - - -	2	3	5	-	-	-	-
	Varicose Veins - - -	-	1	-	-	-	1	-
V. & VI. Diseases of the Absorbent System and Ductless Glands.	Bubo (<i>Symp.</i>) - - -	-	1	1	-	-	-	-
VII. Diseases of the Respiratory System.	Diseases of the Larynx - -	-	1	-	-	-	1	-
	Catarrh - - - - -	3	97	93	-	-	-	7
	Bronchitis - - - - -	-	16	11	-	1	1	3
	Pneumonia - - - - -	1	3	2	-	2	-	-
	Pleurisy - - - - -	-	6	6	-	-	-	-
	Hæmoptysis - - - - -	-	3	3	-	-	-	-
	Emphysema Pulm. - - -	-	1	-	-	-	1	-
	Congestio Pulm. - - -	-	2	-	-	1	-	1

Pembroke, between the 1st of January and the 31st of December 1869.

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease, &c.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
1	18	4	72	-	-	-	-	-	-	5	90
-	-	1	94	-	-	-	-	-	-	1	94
1	8½	2	110	1	6	-	-	-	-	4	124½
-	-	4	23	-	-	-	-	-	-	4	23
-	-	1	4	1	13	-	-	-	-	2	17
6	47½	2	6½	1	20	-	-	-	-	9	74
-	-	-	-	-	-	2	32	-	-	2	32
3	53	11	201½	17	505½	17	333	6	188½	54	1,281½
-	-	2	37	3	17½	6	76	3	43½	14	174
-	-	-	-	-	-	1	26	-	-	1	26
-	-	2	49	1	11	-	-	-	-	3	60
2	115	3	307	1	274	-	-	-	-	6	696
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	5	-	-	-	5
-	-	-	-	-	-	1	12	-	-	1	12
-	-	-	-	-	-	-	-	1	37	1	37
1	37½	-	-	-	-	-	89	-	-	1	126½
-	-	1	1½	-	-	-	-	-	-	1	1½
2	9	-	-	1	2	-	-	-	-	3	11
-	-	-	-	-	-	1	154	-	-	1	154
-	-	1	3	3	36	-	-	-	-	4	39
-	-	1	6½	-	-	2	159½	-	-	3	166
-	-	-	-	-	-	1	54	-	-	1	54
1	12	-	-	-	-	-	-	-	-	1	12
-	-	-	-	-	-	-	-	1	110½	1	110½
23	267	21	220	32	607	15	129	6	135	97	1,358
1	24½	-	-	5	216½	8	332	2	31	16	604
-	10	-	-	3	43	-	-	-	-	3	53
2	37	3	67½	1	47	-	-	-	-	6	151½
2	26	-	-	1	1	-	-	-	-	3	27
-	-	-	-	-	-	-	-	1	123	1	123
-	-	-	-	1	12	1	78	-	-	2	90

MEDICAL and Surgical Report of Her Majesty's Dockyard, *Pembroke*,

		Cases remaining by last Return.	Since added to the List.	Discharged to Duty.	Sent to Hospital.	Dead.	Invalided.	Number now on the List.
VIII. Diseases of the Digestive System.	Cynanche - - -	-	21	19	-	-	-	2
	Hæmatemesis - - -	-	2	1	-	-	-	1
	Stricture of Œsophagus - - -	-	1	-	-	-	1	-
	Dyspepsia - - -	1	43	40	-	-	3	1
	Dysentery - - -	-	1	1	-	-	-	-
	Diarrhœa - - -	1	43	42	-	1	-	1
	Colic and Constipation - - -	-	9	9	-	-	-	-
	Hæmorrhoids - - -	-	2	2	-	-	-	-
	Hernia - - -	-	2	1	-	-	1	-
	Worms (round) - - -	-	2	2	-	-	-	-
	Enteritis - - -	-	2	2	-	-	-	-
	Hepatic Congestion - - -	-	1	1	-	-	-	-
	Jaundice - - -	-	1	1	-	-	-	-
IX. & X. Diseases of the Urinary and Generative Systems.	Calculus in Urethra - - -	-	1	-	-	-	-	1
	Nephritis - - -	-	1	1	-	-	-	-
	Fistula - - -	1	-	-	-	-	1	-
	Stricture - - -	-	2	2	-	-	-	-
	Hydrocele - - -	-	3	2	-	-	-	1
XI. Diseases of the Organs of Locomotion.	Spinal Irritation - - -	-	1	-	-	-	-	1
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess - - -	1	42	40	-	-	-	3
	Ulcer - - -	1	3	2	-	-	2	-
	Ingrown Nail - - -	-	1	1	-	-	-	-
	Eczema - - -	-	1	1	-	-	-	-
	Psoriasis - - -	-	1	1	-	-	-	-
	Erythema Nodosum - - -	-	1	-	-	-	-	1
Unclassed - - -	Debility - - -	-	3	3	-	-	-	-
Wounds and Injuries -	Wounds - - -	7	141	143	1	-	-	5
	Fractures - - -	3	12	11	3	-	-	4
	Sprains - - -	2	39	40	-	-	-	1
	Contusions - - -	5	122	124	2	-	-	3
	Burns and Scalds - - -	1	25	26	-	-	-	-
	Abrasions - - -	-	4	4	-	-	-	-
	Concussion of Brain - - -	-	3	3	-	-	-	-
TOTALS - - -		36	787	744	6	12	18	49

between the 1st of January and the 31st of December 1869, &c.—*continued.*

Cases arranged according to the Ages of the Patients, viz., from										Total Number of Cases since added to the List.	Total Days' Sickness from each Disease, &c.
15 to 25.		25 to 35.		35 to 45.		45 to 55.		55 to 65.			
Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.	Number of Cases.	Days' Sickness.		
7	36	9	92½	2	15	3	19	-	-	21	162½
-	-	1	5	-	-	1	4	-	-	2	9
-	-	-	-	-	-	1	88	-	-	1	88
14	47	5	87½	11	152½	9	111	4	364½	43	762½
-	-	-	-	-	-	1	30	-	-	1	30
7	36½	7	94½	9	53½	17	208	3	56	43	448½
1	11½	3	35	3	12½	2	9½	-	-	9	68½
-	-	-	-	1	6	1	6½	-	-	2	12½
-	-	1	-	-	-	1	38	-	-	2	38
2	22½	-	-	-	-	-	-	-	-	2	22½
1	84	-	-	1	87	-	-	-	-	2	171
-	-	-	-	1	21	-	-	-	-	1	21
-	-	-	-	-	-	1	9	-	-	1	9
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	1	30½	-	-	-	-	1	30½
-	-	-	-	-	-	-	256	-	-	-	256
-	-	-	-	1	21	1	4	-	-	2	25
-	-	-	-	-	-	2	24	1	180	3	204
-	-	-	-	1	179	-	-	-	-	1	179
-	-	-	-	-	-	-	-	-	-	-	-
10	140½	12	106	10	111½	10	114½	-	-	42	474½
1	4	-	-	1	48	1	80½	-	-	3	132½
1	14	-	-	-	-	-	-	-	-	1	14
-	-	1	17	-	-	-	-	-	-	1	17
-	-	-	-	1	11	-	-	-	-	1	11
-	-	-	-	1	1	-	-	-	-	1	1
-	-	-	-	-	-	-	-	-	-	-	-
2	69	-	-	1	19	-	-	-	-	3	88
-	-	-	-	-	-	-	-	-	-	-	-
40	628	45	721½	37	734½	17	306	2	35	141	2,425
4	240½	1	54½	2	157	3	137	2	170	12	759
7	73	6	165½	14	381	10	152½	2	47	39	819
27	264	26	308½	32	413½	32	674½	5	95½	122	1,756
7	44	9	62½	3	38½	6	53½	-	-	25	198½
2	22	-	-	-	-	2	27	-	-	4	49
2	21	-	-	1	17	-	-	-	-	3	38
180	2,422½	185	2,954½	206	4,321½	177	3,836	39	1,616½	787	15,151

Appendix.

MEDICAL AND SURGICAL REPORT
OF
HER MAJESTY'S DOCKYARD AT PEMBROKE,
for the Year 1869,
By Staff Surgeon W. R. DALTON.

REMARKS.

UNDER the heading of what are now called "Zymotic Diseases," including, I suppose, all those placed under Section A. and some under Section B. of the Nosological Return, together with diarrhoea, ophthalmia, phlegmon, stricture, bubo, worms, cynanche, &c., &c., such a vast category of human ills is embraced, if the zymotic orders "Enthetici," "Dietici," and "Parasitici," be included, that this Return must necessarily show that these complaints prevail to some extent amongst the men employed in this dockyard; I must, however, except syphilis and gonorrhoea, which, in Dr. Farr's Nosology, are placed amongst the "Enthetici," these two diseases being apparently almost unknown amongst the dockyard men, which arises, I imagine, from their marrying when quite young, and usually leading moral lives in that respect; but this class of diseases does not relatively number so many as that class which is named "Constitutional," including rheumatism, gout, and tuberculous complaints; and, amongst the last named phthisis appears to be very frequent in this locality; and when it attacks persons between the ages of eighteen and thirty-five years, it runs a rapid course, and generally terminates fatally, as is evidenced by five cases out of the six placed upon the sick-list during the year, having ended in this manner.

Diseases of the brain and the nervous system, although a few cases are enumerated, are not frequent amongst the dockyard men, nor are those of the circulatory system, as a rule.

Diseases of the respiratory system occupy a prominent position on the sick-list, induced by the draughts of cold air to which the men are continually exposed when at work under the sheds, on shipboard, in the workshops, &c., and to their constant exposure to different degrees of temperature, especially those who are employed in the smitheries.

The digestive organs also suffer to a great extent from exposure. With regard to dyspepsia, I am not surprised that a large proportion of the men suffer from this complaint, from the insufficiency of animal food which they allow themselves as working men; this kind of diet being considered by them as superfluous, and they live upon bread and butter and slops in preference; besides which, many of them are rigid "teetotalers," which, in my opinion, contributes materially to the engendering of this complaint, and also of phlegmons and other ailments.

As might be pre-supposed, the dockyard men are very liable to inguinal hernia, from lifting heavy weights, &c.

Looking at the sum total of the diseases and accidents enumerated in this Report, I cannot help thinking that in this dockyard the accidents have been as few as could have been expected from the nature of the duties upon which the men have been employed, and that the sick-list has not been overburthened with patients.

REMARKS upon the Sanitary Condition of Pembroke Dock and its Neighbourhood.

Appendix.

THE town of Pembroke Dock and the surrounding neighbourhood, considering its undrained condition, its great want of pure water in the summer season, the generally uncleanly and unventilated state of the small houses, inhabited by the dockyard men, who are for the most part badly nourished, the open privies, which are very numerous in the town, emitting a most offensive odour during the warm weather, together with the almost continual moisture of the atmosphere, and the low-lying position of the town, is much freer from zymotic diseases (proper) than I could have supposed, although certainly there has been a good share of measles and scarlet fever in the neighbourhood during my residence here, particularly at the village of Pennar, situated upon a hill to the southward of the town, where cholera, when it visited this locality a few years since, carried off a great number of its inhabitants.

The town of Pembroke Dock occupies a wide extent of ground, a tolerably sized garden generally running parallel with the harbour, being attached to each house, and this probably contributes to the salubrity of the place, notwithstanding the many adverse circumstances which apparently militate against it. Why the village of Pennar, to all appearance so much more healthily situated, should constitute a nidus for zymotic diseases more than the town of Pembroke Dock I cannot determine; but it is said its inhabitants, principally dockyard men, are worse fed than those living in the town; and this, together with the undrained condition of the village, and the circumstance of a pool or creek, which is full of mud, and almost dry at low tide, running from Milford Haven at its foot, towards the town of Pembroke, and possibly emitting exhalations deleterious to health, may account for it. The medical practitioners who have been residing here for a lengthened period, although aware of the fact of its unhealthiness, can give no solution of its cause.

A TABULAR STATEMENT of INJURIES which have occurred, consequent upon the nature of the Duties upon which the Men have been employed during the year 1869, in Pembroke Dockyard.

INJURIES.	Brain	Scalp.	Eyes.	Eyelids.	Face.	Neck.	Forehead.	Shoulder.	Arm.	Elbow.	Forearm.	Wrist.	Thumb.	Hands and Fingers.	Side.	Groin.	Buttock.	Thigh.	Back and Loins.	Knee.	Leg.	Ankle.	Foot.	Toes.	Perineum.	Testicle.	TOTAL	
Wounds - . .	-	13	8	-	1	-	-	-	-	2	5	-	-	87	-	-	1	3	-	1	11	1	4	-	-	-	138	
Fractures . . .	-	-	-	-	-	-	-	-	-	1	2	-	3	3	-	-	-	-	-	1	1	-	-	1	-	-	12	
Sprains . . .	-	-	-	-	-	-	-	-	1	-	-	12	1	-	-	-	-	1	13	2	-	7	-	-	-	-	37	
Contusions . . .	-	3	11	-	3	-	-	4	-	-	-	-	-	28	11	-	-	4	8	5	14	-	11	13	1	3	119	
Burns and Scalds . . .	-	-	6	1	1	-	-	-	-	-	7	1	-	7	-	-	-	-	-	-	-	1	1	-	-	-	25	
Abrasions . . .	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	3	-	-	-	-	-	4	
Concussion . . .	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3	
Hernia . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
TOTAL . . .																												339

The three classes of workmen most numerous in the dockyard are shipwrights, labourers, and smiths, and from the nature of their employments, they are more liable to wounds than other classes; the shipwrights, to those of the hand and fingers, and sometimes to those of a graver kind; the labourers, from the varied nature of their duties, to wounds of all parts of the body; and the smiths to burns, and to wounds and burns of the cornea.

I believe attempts have been made to obviate the last-named accidents, by supplying the men with wire spectacles, but these have been seldom worn, from the circumstance of their preventing a sufficient access of light to the eye especially when work is carried on, as it frequently is, between the decks of a ship. The substitution of glass in lieu of wire (transparent glass goggles), might, perhaps, be more effective, but I believe the men have a great objection to anything of the kind.

Appendix.

The circular saw, worked by steam machinery, is a fruitful source of accident, causing severe laceration, mangling and fractures of the fingers, and laceration of tendons in the palm of the hand, from that member being drawn into the machinery, whilst the attention of the sawmill-man, to whom these wounds usually happen, is directed away from the work upon which he is engaged. Wooden guards attached over the saw have, I understand, been recommended for the prevention of these accidents. I think men only who are accustomed to the work should be employed on this duty.

In four of the men whose names appear under the heading of "fracture" the circular saw was the cause of their loss of fingers, &c.

With regard to fractures, I find five of the twelve which have occurred during the year happened to labourers, two to sawyers, two to boys, one to a joiner, one to a smith, and one to a shipwright.

The great majority of sprains are found amongst shipwrights, from treading into manholes, slipping from ladders, treading upon loose pieces of iron, heaving upon spanners, carrying heavy weights, falling forward upon the hands, &c.

There is a great preponderance of contusions amongst the shipwrights also, and the next in liability to these accidents are labourers, and then smiths.

Of concussion of the brain, of which three cases have taken place during the year, one occurred to a shipwright's apprentice, the second to a labourer, and the third to a boy, but usually shipwrights are most subject to these accidents.

A TABULAR STATEMENT of the Number of Men SUPERANNUATED, during the year 1860, in Pembroke Dockyard.

Cases.	Age.	Quality.	Length of Service, exclusive of Apprenticeship Time.		Date of Superannuation.	For what Reason Superannuated.
			<i>Yrs. Mns.</i>	<i>Weeks Days.</i>		
Case 1 -	60	Smith -	34 6	-	1869 : 30 January	On account of age.
" 2 -	60	Smith -	30 6	-	30 January	- ditto.
" 3 -	60	Sawyer -	30 7	-	6 February	- ditto.
" 4 -	49	Saw-mill man -	28 10	-	16 March	Lameness, consequent upon dislocation of left ankle.
" 5 -	60	Shipwright -	31 10	-	25 March	On account of age.
" 6 -	60	Shipwright -	28 9	-	25 March	- ditto.
" 7 -	61	Leading man joiners -	28 10	-	10 April	- ditto.
" 8 -	63	Shipwright -	33 9	-	25 March	- ditto.
" 9 -	60	Smith -	37 9	-	25 March	- ditto.
" 10 -	52	Shipwright -	28 11	-	25 March	Stricture of <i>Esophagus</i> .
" 11 -	49	Labourer -	15 6	5	25 March	Vertigo, result of injury of head.
" 12 -	57	Smith -	36 2	-	25 March	Impaired vision.
" 13 -	56	Inspector of joiners -	29 -	-	30 April	Chronic laryngitis, rheumatism, and nervous debility.
" 14 -	58	Caulkers, leading man -	37 -	-	16 April	From inability to perform his duty with activity, and on account of age.
" 15 -	58	Timber inspector -	37 -	-	16 April	Abolition of office.
" 16 -	60	Shipwright -	33 11	8	4 May	On account of age.
" 17 -	60	Labourer -	29 7	-	20 May	- ditto.
" 18 -	25	Clerk -	7 10	-	12 August	Voluntary retirement, on re-organisation of department.
" 19 -	52	Shipwright, leading man -	32 2	-	28 June	Lameness and imperfect motion of right arm in consequence of dislocation.
" 20 -	42	Shipwright -	21 11	1	7 July	Phthisis.
" 21 -	60	Skilled labourer -	30 -	1 1	21 July	On account of age.
" 22 -	54	Writer -	21 4	1 1	1 September	Dyspepsia and general debility.
" 23 -	48	Shipwright -	20 11	2 1	22 July	Insanity.
" 24 -	39	Shipwright -	14 4	2 1	1 September	Chronic gout.
" 25 -	54	Master shipwright -	33 8	3 6	28 September	By Admiralty order.
" 26 -	46	Clerk -	21 5	-	10 September	Recto-vesical fistula.
" 27 -	60	Labourer -	23 4	1 4	28 September	On account of age.
" 28 -	43	Storekeeper and cashier -	26 1	3 4	9 December	Voluntary retirement.
" 29 -	60	Shipwright -	38 8	-	23 December	On account of age.
" 30 -	60	Messenger -	29 7	-	15 December	- ditto.
" 31 -	56	Writer -	31 9	-	15 December	Dyspepsia and mental dyspepsia.
" 32 -	49	Labourer -	24 4	-	15 December	Chronic catarrh.
" 33 -	59	Shipwright -	34 11	-	15 December	Emphysema Pulmonia.
" 34 -	54	Labourer -	31 5	-	15 December	Ulcer, leg.
" 35 -	44	Caulker -	23 4	-	15 December	Chronic dyspepsia, from a blow over the region of the stomach.
" 36 -	47	Shipwright -	24 11	2	15 December	Direct inguinal hernia, right side.
" 37 -	60	Smith -	35 6	-	29 December	On account of age.

MEDICAL AND SURGICAL REPORTS

For the Year 1869,

OF THE

ROYAL NAVAL HOSPITALS

AT

HASLAR, PLYMOUTH, CHATHAM, HAULBOWLINE,

AND

YARMOUTH LUNATIC ASYLUM.

ROYAL NAVAL HOSPITAL, HASLAR,

UNDER THE CHARGE OF

INSPECTOR GENERAL JAMES SALMON, M.D.

Honorary Physician to Her Majesty.

MEDICAL REPORT FOR THE YEAR 1869,

BY

DEPUTY INSPECTOR GENERAL RICHD. D. MASON, C.B.

Wards on the 1st of January 1869, the Number Admitted during the Year, the from the 1st of January to the 31st of December 1869, inclusive.

Discharged from Books.										
Cured.	Invalid.	Dead.	Sent to Greenwich Hospital.	Sent to Yarmouth R. N. Lunatic Asylum.	Discharged by Admiral's Order.	Marines sent to their own Divisions.	Allowed to go on Leave.	Objects for Survey.	Transferred to the Surgical Wards.	Remaining under Treatment, 31 Dec. 1869.
3	-	-	-	-	-	-	-	-	-	-
33	1	1	-	-	-	-	-	-	-	5
247	4	-	-	-	-	-	-	-	2	-
-	1	-	-	-	-	-	-	-	-	-
1	-	3	-	-	-	-	-	-	-	-
28	3	2	-	-	-	-	-	-	-	1
4	1	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
-	-	1	-	-	-	-	-	-	-	-
3	-	1	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
127	37	3	-	-	-	-	-	-	3	20
3	-	-	-	-	-	-	-	-	1	-
21	81	15	-	-	-	-	4	1	-	37
1	-	-	-	-	-	-	-	-	-	-
10	4	-	-	-	-	-	-	-	-	1
5	2	-	-	-	-	1	-	-	-	1
1	-	-	-	-	-	-	-	-	-	-
-	3	2	-	1	-	-	-	-	-	5
5	6	-	-	3	1	-	-	-	-	7
4	1	-	-	-	-	-	-	-	-	1
-	1	-	-	1	-	-	-	-	-	1
1	8	-	-	-	-	-	-	-	-	2
8	3	-	-	-	-	-	-	-	-	-
-	1	-	1	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	1
-	8	-	-	2	-	-	-	-	-	1
1	1	-	-	-	-	-	-	-	-	1
3	3	-	-	3	-	-	-	-	-	-
-	-	-	-	-	-	-	1	-	-	-
1	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	2
-	1	-	-	-	-	-	-	-	-	1
24	14	-	-	-	-	-	-	-	-	4
3	60	5	-	-	1	-	-	-	-	26
1	1	-	-	-	-	-	-	-	2	-
-	5	4	-	-	-	-	-	-	-	1
-	2	-	-	-	-	-	-	-	-	-
2	-	1	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-

NOSOLOGICAL TABLE, showing the Number of Patients remaining in the Medical Wards

		Admitted.			Total Number of Days' Sickness from each Disease.	Average Number of Days each Case was under Treatment.
		Remaining 1st January 1869.	Admitted during the Year.	Total Number of Persons Treated.		
V. and VI. - - -	No Cases - - -	-	-	-	-	-
VII. Diseases of the Respiratory System.	Congestion of Lung - - -	-	1	1	21	21·
	Hæmoptysis - - -	-	4	4	148	37·
	Influenza - - -	1	-	1	32	32·
	Aphonia - - -	-	1	1	10	10·
	Catarrh - - -	10	27	37	1,645	44·46
	Bronchitis - - -	7	30	37	1,812	48·98
	Asthma - - -	1	1	2	51	25·50
	Pneumonia - - -	6	45	51	1,610	31·56
	Pleurisy - - -	1	3	4	134	33·50
	Pleurodynia - - -	-	5	5	157	31·40
	Pertussis ‡ - - -	-	1	1	30	30·
VIII. Diseases of the Digestive System.	Effects of Drinking - - -	-	1	1	34	34·
	Gastritis - - -	-	1	1	73	73·
	Gastralgia - - -	-	2	2	153	76·50
	Cynanche - - -	2	20	22	615	27·96
	Vomiting - - -	-	1	1	22	22·
	Dyspepsia - - -	1	29	30	1,139	37·97
	Dysentery - - -	1	13	14	625	44·64
	Diarrhoea - - -	2	10	12	457	38·06
	Constipation - - -	-	2	2	113	56·50
	Colic - - -	-	2	2	40	20·
	Worms - - -	-	1	1	11	11·
	Peritonitis - - -	1	3	4	226	56·50
	Enteritis - - -	-	4	4	63	15·75
	Hepatitis - - -	1	14	15	614	40·94
	Icterus - - -	1	11	12	351	27·59
	Disease of Stomach - - -	1	-	1	46	46·
	Ascites - - -	-	3	3	172	57·33
IX. and X. Diseases of the Urinary and Generative Systems.	Bright's Disease - - -	-	2	2	50	25·
	Albuminuria - - -	-	9	9	438	48·67
	Nephritis - - -	-	4	4	232	70·50
	Incontinence of Urine - - -	1	1	2	42	21·
	Hæmaturia - - -	-	2	2	121	60·50
	Retention of Urine - - -	-	1	1	17	17·
XI. Diseases of the Organs of Locomotion.	Cystitis - - -	-	2	2	66	33·
	Diseases of the Joints - - -	-	-	-	-	-
	Coxalgia - - -	-	1	1	29	29·
XII. and XIII. Diseases of the Cellular Tissue and Cutaneous System.	Disease of the Spine - - -	-	2	2	64	32·
	Porrigio - - -	-	1	1	84	84·
Unclassed - - -	Urticaria - - -	-	1	1	9	9·
	Debility - - -	4	54	58	1,684	29·01
	Senility - - -	-	7	7	651	93·
TOTALS - - -		157	1,191	1,348	55,571	41·23

‡ General Diseases, A. Here in Nosologicals, so retained.

on the 1st of January 1869, the Number Admitted during the Year, &c.—*continued.*

Discharged from Books.										
Cured.	Invalided.	Dead.	Sent to Greenwich Hospital.	Sent to Yarnmouth R. N. Lunatic Asylum.	Discharged by Admiral's Order.	Marines sent to their own Divisions.	Allowed to go on Leave.	Objects for Survey.	Transferred to the Surgical Ward.	Remaining under Treatment, 31 Dec. 1869.
-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
22	15	-	-	-	-	-	-	-	-	-
18	10	2	-	-	-	-	-	-	2	5
-	1	-	-	-	-	-	-	-	-	-
32	6	8	1	-	-	-	1	-	-	4
3	1	-	-	-	-	-	-	-	-	-
4	1	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
1	1	-	-	-	-	-	-	-	-	1
22	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	1
24	2	-	-	-	-	-	-	-	-	3
7	4	2	-	-	-	-	-	-	-	-
8	2	-	-	-	-	-	-	-	1	1
1	-	-	-	-	-	-	-	-	-	1
2	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-
-	2	1	-	-	-	-	-	-	-	1
2	-	1	-	-	-	-	-	-	-	1
13	2	-	-	-	-	-	-	-	-	-
9	-	1	-	-	-	-	-	-	-	2
1	-	-	-	-	-	-	-	-	-	-
-	1	2	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-
4	1	-	-	-	-	-	-	-	-	4
3	-	-	-	-	-	-	-	-	-	1
1	1	-	-	-	-	-	-	-	-	-
1	-	1	-	-	-	-	-	-	-	-
1	-	1	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-
-	1	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	1
38	7	2	-	-	-	-	1	-	1	9
1	-	1	-	-	-	-	-	-	-	5
777	310	60	2	10	2	1	7	1	17	161

Appendix.

MEDICAL REPORT
OF THE
ROYAL NAVAL HOSPITAL, HASLAR,
FOR THE YEAR 1869,
BY
DEPUTY INSPECTOR GENERAL RICHD. D. MASON, C.B.

REMARKS.

DURING the year 1869 there were treated in the medical wards of the Royal Naval Hospital at Haslar, 1,348 cases of disease, viz., 157 remaining from 1868, and 1,191 admitted during the twelvemonth (January to December), giving 55,571 days' sickness, or an average length of treatment of 41.23 days per case.

The average number of beds occupied was 152.25, distributed through about 25 wards (some containing only one, but most 14 beds). The average cubic space per bed varied in the different wards, but in those on the upper floors (by far the smallest in the hospital), 1,075 cubic feet was the allowance when all the beds were occupied. The average superficial space per bed was, under like conditions, 105 feet.

The size of the wards for fourteen beds was :—

Length	-	-	-	-	-	-	-	-	-	<i>Ft.</i>	<i>in.</i>
Breadth	-	-	-	-	-	-	-	-	-	61	3
										24	2
										<i>Ft.</i>	<i>in.</i>
Height, lower floor	-	11	11	Cubic contents	-	17,639'	1"	9"			
" first floor	-	12	1	" "	-	17,885'	10"	2"			
" second floor	-	10	2	" "	-	15,048'	9"	5"			
From floor to window	-	3	7	Average superficial space per bed	-				105½	feet.	
For ventilation :						<i>Ft.</i>	<i>in.</i>		<i>Ft.</i>	<i>in.</i>	
2 ward doors	-	-	-	-	-	7	1	×	3	7	
1 closet door	-	-	-	-	-	4	2	×	2	4	
4 ventilators	-	-	-	-	-	1	2	×	0	4	
7 windows, upper wards	-	-	-	-	-	4	6	×	3	10	
Lower ward	-	-	-	-	-	6	9	×	3	9	

Average cubic space per bed :

Lower floor, 14 beds	-	-	-	-	-	-	=	1,074'	11"
First floor, 14 beds	-	-	-	-	-	-	=	1,259'	11"
Second floor, 14 beds	-	-	-	-	-	-	=	1,277'	7"

supposing all the beds in the ward to be occupied.

supposing all the beds in the ward to be occupied.

The patients were attended by one inspector general of hospitals and fleets, and two assistant surgeons of the permanent staff, with occasional temporary assistance from acting assistant surgeons, and supernumerary medical officers, who were waiting other appointments. The number of nurses varied from twenty to thirty, and eight scrubbers or charwomen were partially employed cleaning passages, staircases, &c. The ward cleaning and scrubbing being done by the convalescent patients under the supervision of the nurse.

With the exception of an epidemic of measles which occurred in Her Majesty's ship *St. Vincent*, the boys' training ship at Portsmouth, in the month of May, the cases were of the usual character, a large proportion of them being invalided

invalided from foreign stations, men with chronic organic ailments, lunatics, pensioners, Greenwich Hospital inmates, "Objects for Survey," patients "waiting for their papers" after having been invalided, and others having no acute symptoms of disease.

Of the total number treated, 777 were discharged as "cured"; 310 were considered unfit for further service, and invalided; sixty died in the hospital; two were transferred to Greenwich Hospital; ten being lunatics, and showing no sign of early recovery, were sent under escort to the Yarmouth Royal Naval Lunatic Asylum; two being prisoners were "discharged by Admiralty order"; one marine was transferred to his own division; seven (officers) were allowed to go on leave to recruit health generally, having been invalided from foreign stations, and simply suffering from debility, the result of previous disease; one (boatswain) was sent back to the dockyard to which he belonged to await survey there; seventeen were transferred to the surgical wards (mostly venereal cases), and 161 remained under treatment on the 31st December 1869.

The proportion of cases of acute disease was very small, perhaps not more than ten per cent. of the whole number.

The largest number of days' sickness was, as might be expected, from phthisis pulmonalis, viz., 9,142 days, or an average of 57·49 days for each of the 159 cases; next in the list stands rheumatism, 8,932 days for 190 patients, or 47·01 days per case; measles next, with 7,054 days for 253 cases, or 27·88 days per case; organic disease of the heart, with 4,805 days for ninety-five cases, or 50·57 per case; palpitation or functional disease of the heart gave 1,546 days, for forty-two cases, or an average of 36·81 days; the other heavy items were—

	Number of Cases.	Number of Days' Sickness.	Average Number of Days each Case was under Treatment.
Debility - - - - -	58	1,684	29·04
Paralysis - - - - -	22	1,901	86·41
Bronchitis - - - - -	37	1,812	48·98
Catarrh - - - - -	37	1,645	44·46
Pneumonia - - - - -	51	1,610	31·56
Simple Continued Fever - - - - -	34	1,410	41·47
Dyspepsia - - - - -	30	1,139	37·97
Cerebral disease - - - - -	11	1,095	99·54

There does not seem to have been anything peculiar to notice about the treatment adopted generally, the same general principles seem to have been adopted by all the various medical officers, and, speaking collectively, the tonic and stimulating plan (and the avoidance of bleeding and mercury) was that most in favour. In small-pox the eruption was painted over with a solution of gutta percha in æther, and afterwards dressed with glycerine and carbolic acid. Ordinary naval lime-juice, diluted, was extensively used as a drink in fever. Cod-liver oil was very largely used for phthisis, debility, and chronic rheumatism. Mercury, as noted above, was scarcely ever used, except as a purgative, and for some chronic hepatic derangements, in which it does not seem to have done much good. Bleeding generally was only resorted to once, a case of pneumonia, and then with negative results. Leeches were occasionally used to relieve pain, and in some small number of persons with ophthalmic complications, or persistent headache. Setons were used for the relief of the latter symptom. Galvanism (by the interrupted current) was adopted in paralytic cases. Hot water baths were given to all patients on admission, unless forbidden by the receiving surgeon.

Small-pox.—One case remained under treatment from 1868, and two were admitted during 1869. All three were discharged cured after 117 days' treatment, or an average of thirty-nine days per case; they were all sporadic cases; their origin had not been traced; one an A.B., æt. 20, was admitted from the Excellent on the 21st December 1868. An A.B., æt. 24, was admitted from the Bellerophon on the 24th May 1869, and a servant, æt. 20, from the Asia, on the 12th April 1869. The eruption appeared on the third or fourth day, was not confluent;

Appendix.

fluent; the fever was slight, and subsided on the appearance of the eruption. The spots were mostly on the face, some few being scattered over the back. Two of the men had been vaccinated in infancy; there are no notes on this point in the other case; the cases were all mild, and there was no secondary fever. The man who came from the Asia was, after being cured of variola, transferred to the surgical wards for scabies, which he must have contracted in the hospital.

Treatment.—A strong gutta percha solution painted over the face and other parts where the eruption appeared, and when this cracked and peeled off, glycerine and olive oil was applied. Salines and low diet at first, and during convalescence the citrate of quinine and iron mixture, with good diet and beer.

Scarlet Fever.—Twenty-four cases remaining from 1868, and seventeen admitted during 1869, of whom thirty-three were cured; one invalided; one died; one transferred to the surgical wards, and five remained under treatment on the 31st December 1869. Loss of service, 898 days, or an average of 21·90 days per case. The rash appeared in thirteen, and was generally in the form of a bright scarlet efflorescence all over the body and extending to the mucous membrane of the mouth and fauces. In the whole fifteen cases there was enlargement, pain in, and tenderness of tonsils; in three cases the inflammation passed on to ulceration, the bases of the ulcers being covered with a somewhat tenacious greyish slough. Desquamation took place generally about the eighth day, and once the eruption became vesicular on that day. In one case the rash appeared more like eczema than the ordinary form for scarlet fever; the skin was tense, thickened, slender, and covered by a multitude of small miliary vesicles, from which, when punctured, a whitish transparent fluid exuded; this was attended with intense tingling, burning, and irritation; on the fourth day the vesicles dried up; on the fifth a slight furfuraceous desquamation commenced, and on the tenth day this became general. The man invalided was an A.B., æt. 23, of the Asia, who was sent in for cyanche; no rash appeared, but he had extensive ulceration of the tonsils. Hæmoptysis and other signs of phthisis presented themselves, and he was in consequence brought forward for survey.

The disease was in two cases followed by albuminuria, but neither patient suffered much inconvenience, the symptoms being confined to puffiness of the face, particularly the eyelids, pallid countenance, œdema of the feet and ankles, and a deposit of about one-eighth of albumen from boiled and acidulated urine; they both rapidly recovered, and one was transferred to the surgical wards for the treatment of syphilis, of which he was the subject.

In one case chronic rheumatism, and in another chronic bronchitis, came on during convalescence, but both readily yielded to the remedies employed.

The treatment consisted of confinement to bed, diluent drinks, salines, and gargles of chlorate of potash. *Pv.* Jalapæ, co. and *Tr.* Ferri. perchlor. for the dropical cases, with baths and citrate of quinine and iron during convalescence; a moderate diet and the absence of all stimulants. There does not seem to have been anything which could be called secondary fever, nor were there any relapses.

Measles.—Nearly all the sickness under this heading was caused by the spread of an epidemic on board Her Majesty's ship *St. Vincent*, the training ship for boys at Portsmouth. It appears, a boy belonging to that ship, whilst on leave at the end of April with his friends at Dartmouth (where measles was prevalent), returned on board about the 1st of May, being at that time quite well. On the evening of the 2nd he complained of cold, rigors, and drowsiness; next morning (May 3rd) well-marked symptoms of coryza and febrile disturbance showing themselves, he was sent to Haslar. The same day, another boy was sent with somewhat similar symptoms, but less marked; both turned out to be cases of measles. The disease rapidly spread, as might be anticipated in such a luxurious field as a boys' training-ship presents. On the 6th, two more boys were admitted to the Hospital; on the 7th, a pupil teacher; on the 8th, eight boys; on the 9th, nineteen boys; on the 10th, twenty boys; on the 11th, twenty-nine boys; on the 12th, sixteen boys, an A.B., and a Corporal of the Royal Marine Light Infantry; on the 13th, eighteen boys; on the 14th, fifty boys; on the 15th, nine boys; on the 16th, eleven boys; on the 17th, twelve boys; on the 18th, eleven boys; on the 19th,

19th, three boys ; on the 20th, two boys and the assistant surgeon (who had been in constant attendance on the sick all through the epidemic) ; on the 21st, seven boys ; on the 22nd, six boys ; on the 24th, a Private of the Royal Marine Light Infantry ; and on June 3rd, a boy, who may be said to have been the last case. There were others at a later date, but which must have been etiologically distinct from the above.

The patients were treated in the "measles" wards at first, but as these soon became filled up, the general wards were cleared out and used for these boys. The ward known as No. 67 was the first opened, No. 75 next, No. 77 the third, No. 87 the fourth, No. 89 the fifth, No. 53 the sixth ; then, as the great numbers came in, wards numbered 3, 7, 17, 51, 55, 57, 59, 61, 64, 71, 74, 76, 78, 80, 82, and 83, were successively occupied. Ample space was allowed (from 1,100 to 1,400 cubic, and about 100 superficial feet per bed) at the "most crowded" times.

The treatment was simple ; no specific was tried.

Of the 253 cases admitted, 247 were discharged cured, four were invalided, and two were transferred to the surgical wards. Number of days' sickness, 7,054, or an average of 27.88 days per case.

The eruption was detected in 106 out of the 253 cases, and was well-marked in thirty-six only. It generally appeared from the second to the fourth day. The "horsehoe"-shaped patches were scarcely ever observed. It seems to have varied from a "local mottling" of the skin, or a few dusky spots on face and chest, to the well-known mulberry rash, covering the whole surface. In character, as well as degree, it seems to have varied considerably, sometimes being merely an undefined blush over the whole surface, evanescent, reappearing, and fading, and passing off into a patchy roughness of the cuticle. In one case there was considerable inflammation of the whole skin, thickening about the "soft places" on the "inner aspect" of joints, with a raised tender and irritable crop of papulæ and vesicles. In two cases the mottling of the skin reappeared during the secondary fever for only a short time (one day). General desquamation was scarcely ever observed, only in three cases lasting three days ; local peeling was more common. Generally the epithelium was slow in removal, causing harshness or roughness of the skin, with furfuraceous patches about the outsides of the joints.

There were but two cases of chest complication (if the ninety-two cases of trifling cough be excluded) ; one of these was invalided, viz., a strumous boy, who had pneumonia, followed by phthisical symptoms, and softening of the apex of the right lung and intermittent pulse ; the other was a case of ordinary bronchitis, readily yielding to treatment. The other complications and sequelæ—all slight—were as follows : of the four second-class boys who were invalided, one had pneumonia (as detailed above), another had organic disease of the heart (a systolic murmur at apex) and acute synovial rheumatism, with effusion into joints ; the third had organic heart disease (a systolic murmur at the base) ; and the fourth had phthisis, hæmoptysis, and heart disease (a systolic murmur at apex). One was transferred to the surgical wards for an ulcer on the heel.

Amongst the patients returned cured, two, had rheumatism ; one, a purulent discharge from the right ear ; one, abscess in right temple ; one, bronchitis ; one, "ecchymosis" of both eyes ; three, had cardiac pain and palpitation ; two, acne ; six, vertigo ; three, boils ; five, conjunctivitis ; one, dyspepsia ; one, abscess in right tonsil ; one, inflammation of both tonsils ; four, diarrhoea ; two, deafness ; one, enlargement of both mammary glands ; one, a crop of herpes on lips ; one, low fever ; one, eczema ; one, abscess in right ear ; one, jaundice (on the 20th day) ; one, epistaxis ; two, urticaria ; one, whitlow, resulting in ulcer of right index finger ; one, enlarged cervical glands.

The febrile disturbance was generally but faintly marked, rarely amounting to more than a feeling of malaise, with trifling heat of skin and but little quickening of the pulse ; yet in about half-a-dozen cases the premonitory fever was somewhat severe. There was no great amount of headache or aching of the limbs, nor kidney derangement.

Coryza was the most constant symptom, and was only absent thirty-four times. Ulcers formed on the tonsils in four cases. There was "dryness and soreness" of the throat in fifty-six, and cough was present in ninety-two. In twelve cases a sort of secondary fever appears to have shown itself, lasting from one to four days, and occurring on the fourteenth to the twenty-eighth day, twice attended by a reappearance of the rash.

Appendix.

General desquamation is noted to have occurred only in three cases.

"Secondary fever" occurred in one case on the 13th day for one day, and in another for three days; on the 14th day in one case for one day; in another for four days on the 15th day, with a return of mottling on the trunk, followed in ten days by another return of the fever without eruption; on the 16th day, with mottlings, "as if the rash was coming out again," but soon fading. In two cases, on the 20th day for one day. In three cases, on the 25th day for one day, and in one case on 28th day for one day.

The treatment adopted was very simple, In by far the larger number of cases nothing was required beyond confinement to bed in an even temperature, and a few doses of saline mixture and lime-juice drink.

After the feverish excitement subsided, good diet was given, and the patients simply detained in hospital for the purpose of segregation. [Her Majesty's ship Victoria having been fitted up as a temporary hospital ship, 174 convalescent patients were transferred to her on the 8th of June; two days afterwards two boys were sent back to Haslar for secondary fever. On the 11th June, fifty-one more of the boys were transferred to the Victoria, and on the 15th June the Inspector General, considering the epidemic terminated, distributed the remainder of the cases convalescing from measles through the ordinary medical wards, two going to the surgical side, one for gonorrhoea and one for ulcer. The Inspector General recommended that the St. Vincent should be cleaned and fumigated before the boys returned to her.]

In the more severe cases, *Pv. Antimonialis* and *Liq. Amm. acetatis* were given. Blue pill in the case complicated with jaundice. *Syrupus Ferri iodidi* was given occasionally, and in only five was wine considered necessary; in one case a pint of porter was added to the usual diet.

There was not a single death, proving this to have been a very mild form of the disease, and unusually free from any complication. To the prompt measures adopted, and the care and attention bestowed on the boys in hospital, this is in some measure due. Compared with the average rate (which varying from one in three to one in forty of those attacked during different epidemics, the average being about one in fifteen), the result must be considered highly satisfactory.

Typhus Fever.—An A. B., æt. 23, was admitted on the 25th of March 1869, from the Euphrates (per Jumna). He was subsequently invalided for phthisis.

Enteric Fever.—Four cases, of whom one was cured and three died; 137 days' sickness, or an average of 34.25 days per case. An O.S., æt. 20, of the Duke of Wellington, was admitted with low fever and sore throat, iliac tenderness, diarrhoea, and yellow offensive stools, was delirious at night, and had a few scattered, raised, pink spots on abdomen; great prostration, faucial voice, rapid emaciation, deafness, and weakness of the mental faculties. Treated by sinapisms to the abdomen, ice, salines, and mercury; and, during convalescence, wine, and quinine-and-iron mixture.

Simple Continued Fever.—Six cases remained from 1868, and twenty-eight cases were added; of whom twenty-eight were cured, three were invalided, two died, and one remained under treatment on the 31st December 1869. 1,410 days' sickness, or an average of 41.47 days per case.

A boy, æt. 17, from the St. Vincent, was admitted after having had an epileptic fit; he had smart fever, with delirium, but recovered. Three cases were sent in for "enteric fever," and in one of them there was a well-marked "rose" rash. The three persons invalided were,—1st, a boy, æt. 16, admitted from the Excellent for scarlet fever; no rash appeared, but the symptoms of phthisis and a systolic murmur were detected; he was surveyed for morbus cordis. 2nd, a marine, æt. 32, also from the Excellent, suffered from fever whilst "paralysed"; on recovery he was surveyed and discharged for the more serious complaint. 3rd, an A. B., æt. 32, belonging to the Asia, after recovery from fever, became strange in his manner, and was surveyed and discharged for "vertigo."

Most of the cases were of little severity, but assuming a low type; and there were a good many complications; viz., pleuritis, two; pneumonia, three; bronchitis, three; phthisis, two; chronic enlargement of tonsil and sore throat, five; diarrhoea, one; cough, one; hæmoptysis, two; abscess in nose, one; jaundice in one; "a mottled efflorescence on skin," one; and exanthematous eruption in one; and "a blush on skin" in one.

Treatment.

Treatment.—In “observation” wards, confinement to bed, with simple salines in uncomplicated cases, with quinine and iron, and wine during convalescence. Six leeches were applied to the chest in one of the pneumonia cases, and their bites followed by very profuse bleeding, and with no marked benefit to the symptoms. Antimonials, blue pill, cod-liver oil; blisters and sinapisms. Leeches were also employed in one patient for pain in the ear; and in this, as in the previous occasion, they did no perceptible good.

Ague.—Five cases, of whom four were cured, and one was invalided; they caused 211 days' sickness, or an average of 42·20 days per case.

A caulker, *æt.* 31, a prisoner from Lewes, where he had been sent from Her Majesty's ship *Agincourt*; after low diet and hard work, ague came on, attended by great irritability of stomach, vomiting blood occasionally; he was sent to Haslar for observation and treatment; a systolic bruit was detected, and he was invalided for morbus cordis. 2nd. A Haslar Hospital nurse; the disease came on in the hospital; but the first attack was some seventeen years before; under *gr. iij.* doses of quinine he recovered. 3rd. A leading stoker, *æt.* 28, from the *Buzzard*, admitted for a return of “ague after coast fever”; it came on whilst at Portsmouth; the paroxysms were severe, and attended with delirium; under *gr. v.* doses of quinine he recovered. 4th. An O. S., *æt.* 20, of the *Monarch*, contracted tertian ague at Sheerness, and was cured by *gr. vj.* doses of quinine; he continued to suffer from palpitation and headache, and two months afterwards, quotidian ague necessitated his admission into hospital. He had also tapeworm, for which he took several doses of the oil of male fern, but, though long portions were detached, the head did not come away; being cured of ague, by *gr. v.* doses of quinine, he was discharged.

Remittent Fever.—One case, remaining from 1868, was fourteen days under treatment, and then discharged cured.

Cholera.—A case of sporadic cholera was admitted from Her Majesty's ship *Excellent*, in September, and died nine days afterwards; the man appears to have been seized suddenly, whilst on leave, with violent vomiting, purging, and great prostration; on admission, on the third day of the disease, there was suppression of urine, great irritability of stomach, frequent pale but scarcely rice-water dejections, and collapse. He rallied for a few days, but sank exhausted on the twelfth day of the disease. At the autopsy the small intestines were found congested and inflamed, but there was no ulceration.

Febricula.—Four cases, of whom three were cured, and one remained under treatment on the 31st December 1869. 139 days' sickness, or 34·75 days per case. A stoker, *æt.* 44, belonging to Her Majesty's ship *Hercules*, had a mild attack, and was treated by salines and rest. 2nd. A gunner, R. M. A., from headquarters, had sharp fever, with sleeplessness, diarrhoea, ochreous stools; dry, red, cracked tongue, and some tenderness in right iliac region. After recovery he complained of fixed, constant pain in the left hip joint, which detained him in hospital, altogether, ninety-eight days. 3rd. A marine, *æt.* 20, from headquarters, had sharp fever and vertigo, dimness of vision, frontal headache, and epistaxis; was a great smoker; he rapidly recovered under simple treatment, salines and sinapisms to nuchæ.

Diphtheria.—A single case, which proved fatal on the second day, and of which no notes can be found.

Malarious Cachexia.—One case, a second captain of the fore-castle, who had been invalided from Malta Hospital, after a long continuation of monthly attacks of fever of an intermittent character, and whose constitution then, seemed much broken up by it. He had taken quinine, arsenic, &c., but until he left the station he made no improvement; but directly he got into cool weather he began to pick up, and on admission was nearly well, but was suffering from tapeworm, of which he was relieved by six ounces of *Inf. Koussou*, and in six days was discharged cured, and allowed to go on leave.

Rheumatism.—Thirty-two cases remained from 1868. 158 were admitted in 1869, of whom 127 were cured, thirty-seven invalided, three died, three were transferred to the surgical wards, and twenty remained on 31st December 1869. 8,932 days' sickness, or 47·01 days per case.

Appendix.

There were thirty cases of acute rheumatism (including five complicated with endocarditis and five with pericarditis), sixty-three sub-acute, or chronic; forty-four of syphilitic (mostly in a very chronic stage), only about half-a-dozen showing any acute symptoms or fever. There probably should be a much larger number under this heading; but the men have a habit of denying having had venereal disease, and unless they carry about their persons some cicatrices it is difficult to *prove* that they are not telling the truth. There were eight cases of gonorrhoeal rheumatism, and four of rheumatic gout. There were many foreign invalids, and on admission, generally, the men appeared in a state of broken-down constitution and liability-to-low-forms-of-disease condition. Many were suffering from the effects of other diseases; viz., from dysentery, four; tumour in iliac fossa, one; abscess in hand, one; bronchitis, one; sprained ankle, one; irritation of spine, and tenderness over the fifth dorsal vertebrae, one; psoas abscess, one; intense debility, "amounting almost to paralysis," one; ankylosis of hip joint, and two and a-half inches shortening of limb, one; erysipelas, one; tapeworm, six. During treatment in hospital the following complications occurred; viz., pericarditis, five; endocarditis, five (as noted above); palpitation and disease of the heart, four; gonorrhoea, three; scrofulous swellings in neck, one; conjunctivitis, one; urticaria, one; incontinence of urine, two; oedema of ankles, two; sloughing of heels, two; facial paralysis, one; ophthalmia tarsi, one. Of the three cases transferred to the surgical wards, one was for ophthalmia tarsi, and two were for gonorrhoea. Of the thirty-seven invalids, one was surveyed for lameness (ankylosis of hip joint, and two and a-half inches shortening of limb); four were for organic disease of the heart; ten for syphilitic rheumatism; one for gonorrhoeal rheumatism; one chronic rheumatism, after severe dysentery; one weak eyes; one erysipelas; three lameness; one lameness and lepra; one chronic rheumatism and atrophy of thigh; two for phthisis; one chronic rheumatism and facial paralysis; one for scrofulous swellings in the neck; and the rest for chronic rheumatism. In the cases of gonorrhoeal rheumatism the pains seem to have commenced before the discharge from the urethra ceased, frequently within a fortnight of the commencement of the disease; were much worse when the patient was warm in bed, towards the early morning; attacked the tissues about the long bones—arms, forearms, thighs, and shins; were not easily removed by treatment, and seemed to have a more depressing effect on the constitution of the patient than any other form of rheumatic affection.

In the syphilitic cases the pains commenced usually about a month after the healing of the primary sores, at first being very slight, but gradually increasing in intensity till they totally prevented nocturnal sleep, though they left the patient tolerably free during the day; attacked by preference the palmar and plantar fascia, scalp, outside of forearms, sternum, and shins. In the cases accompanied by fever, the form the disease took was articular and not synovial; Iodide of potassium was of marked benefit.

Syphilitic was of shorter duration and rather more amenable to treatment than gonorrhoeal rheumatism, and was but rarely followed by any cardiac mischief.

Boys and young persons seem to have had the synovial form of the acute disease, the older patients having the articular.

In many of the chronic cases it is noted that there were no objective symptoms discoverable after the most careful examination, the patients' own statements being the only "evidence" of disease. All the patients who had "rheumatic fever" slept in blankets and were kept as much out of the way of draughts as the state of the hospital windows and doors permitted. All the patients able to leave their beds wore the hospital flannel shirts and long flannel coats. The local treatment consisted of blisters, sinapisms, liniments, fomentations, and flannel bandages to the inflamed joints. Alkalies (generally twenty grains each of the bicarbonate and acetate of potash and nitre) were given internally with colchicum and opium. Guaiacum was much used, but does not seem to have produced any marked effect. Iodide of potassium, in doses varying from three to ten grains, with ten minims of Liq. Potassæ in the compound decoction of sarsaparilla or decoction of cinchona, or sometimes with infusion of quassia, with a grain or two of quinine added, was much used for the venereal forms of the disease. Calomel and opium (gr. ij. ad gr. ʒ) was administered in a few of the cardiac and syphilitic cases. Chlorodyne, hyoscyamus, and camphor draughts to relieve pain and procure sleep. Belladonna, aconite, opium, soap, camphor, turpentine, occasional baths (generally the ordinary warm bath). Cod-liver oil

oil (frequently during convalescence or when any symptoms of phthisis presented themselves); tincture of the perchloride of iron, and the citrate of quinine and iron were used; the last-named remedy being given in 'almost' all cases after acute symptoms had passed and weakness only remained. Lime-juice seems always to have been given as a drink. The diet, at first low was for the greater number of days "half," rarely "full." Five ounces of wine each was given daily to twenty-two patients; a pint of porter each daily to four, and the usual amount of small beer (a pint and a half to those on full diet).

Appendix.

Lumbago.—One case remaining from 1868 and three added, of whom three were discharged cured, and one was transferred to the surgical ward (an A.B., æt. twenty-five, belonging to the Serapis), after 141 days' treatment by iron, blisters, stupes, sinapisms, cod-liver oil, &c., for chronic lumbago pains, sciatica, and abscess over left bursa patella; the latter left an ulcer which would not heal; the patient had purchased his discharge from the service and was naturally anxious to be quite well and fit for work on his leaving the hospital. A second mate of the Coastguard cruiser *Seamew* was cured in eleven days of old lumbar pains by baths and turpentine stupes; this patient also had syphilis, which at the same time was cured. There was 226 days' sickness under this heading, or an average of 56.50 days per case.

Phthisis Pulmonalis.—Fifteen patients remained in hospital from 1868. 144 were admitted in 1869; of these, twenty-one were discharged as cured; eighty-one invalided; fifteen died; four were allowed to go on leave; one (a boatswain) was a case for dockyard survey and, thirty-seven remained under treatment, 31st December 1869. 9,142 days' sickness, on an average 57.49 days per case.

The cases are, with very few exceptions, of long standing and serious organic disease; the "exciting cause" being traced in twenty-three instances to debility succeeding the following diseases, viz.: double broncho-pneumonia following dysentery, one; pneumonia, three; severe secondary forms of syphilis, four; long standing gonorrhoea, three; sunstroke, one; pleurisy with effusion, one; severe acute rheumatism, one; chronic rheumatism, one; dysentery, two; hepatitis, one; debility after an accident, one (a fall); syphilitic rheumatism, one; bronchitis, one; bronchitis following a fall overboard, one; intermittent fever, one; typhus fever, one.

The complications recorded in the notes were not numerous, viz.: pleurisy with effusion, one (the ordinary slight attacks of pleurisy occurring in the course of the disease not counted); epilepsy, one; bubo, one; systolic murmur at base, one; systolic murmur at apex, one; deformed chest, one (coming on, according to the patient's statement, during the progress of the chest symptoms); "violent attacks of spasmodic dyspnoea," two; gout, one; attacks of syncope, one; intermittent pulse, one; inflammatory enlargement of left testicle and cord from an old injury at drill, one.

Thirty-four of these persons had been invalided from foreign stations.

As to the liability of the different parts of the lungs to tubercular deposit, it may be said that of these ninety-five cases there was consolidation of the right apex in forty-one, and softening in thirty; consolidation of the whole of the right lung in three, and softening in three; consolidation of the right base in three, and this had passed on to softening in two; consolidation of left apex in forty-three, which had passed on to softening in thirty-eight; consolidation of the left base in three, and softening in two; consolidation of the whole of the left lung in two, and softening in one. Hæmoptysis occurred in fifty-three cases, but of these only four were sudden attacks or to any dangerous extent; in the rest the amount of blood brought up varied from just enough to streak the sputa to amounts of eight to ten ounces at a time. Epistaxis occurred in one case; colliquative diarrhoea in five; palpitation in one. A systolic bruit was heard in two cases; persistent vomiting troubled three; there was an anæmic bruit in one, and chronic enlargement and signs of old ulceration in nine (granular tonsils).

Treatment; "cod-liver oil and tonics" was the accepted routine treatment; oil was given in eighty-five out of ninety-five cases, and the hospital mixture of the citrate of quinine and iron in eighty cases; wine to forty patients (generally 3*vi* daily), and porter in seven; attacks of dyspnoea were treated by Æther, ammonia, Tr. camph. co., various expectorants, chlorodyne; sinapisms, stupes, linseed

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linseed poultices, &c. being applied to the chest ; slight pleuritic attacks were met by antimonial salines, blisters, and other forms of counterirritation ; hæmoptysis by acetate of lead, Acid. sulph. dil., with tannic and gallic acids, and digitalis, ice, morphia, &c. ; night sweats by acids and oxide of zinc ; palpitation and wandering chest pains by Empl. belladonnæ, Tr. iodi., opium liniment, &c. ; sore throat by liquorice, myrrh and alum gargles, and chlorate of potash ; obstinate constipation or irregularity of the bowels by blue pill.

Cerebritis.—One case, discharged after twenty-five days' treatment, occurred in the person of the admiral's printer, a weak, delicate, phthisical man, who had suffered from hæmoptysis ; he had been invalided from Her Majesty's ship Bristol on the West Coast of Africa in 1865, and had ever since been subject to attacks of this disease. In February 1868 he had mania, during which he attempted to murder his wife with a red hot poker ; friends interfered, and he was chased to the roof of his house, and getting down injured his back ; he was then sent to Haslar ; the paroxysm passed off, but he had epilepsy, for which he was invalided ; was then twenty-three days under quiet and sedatives. On 18th December 1868 mania came on again ; he again attempted to murder his wife ; was brought to Haslar, where he became quiet, and after twenty-four days' residence was discharged cured ; ten days afterwards he was re-admitted for the same symptoms ; large doses of bromide of potassium were given, and he was again discharged cured after twenty-four days' treatment.

Delirium Tremens.—Three cases remained from 1868, and twelve were added ; ten of these were discharged as cured ; four were invalided, and one remained 31st December 1869 ; 457 days' sickness, or an average of 30·47 days per case. Ratings : five were seamen, six marines, one was a bandsman, and three were stokers. There were no deaths. The symptoms were well marked. In the fourteen cases of which notes can be found, there was tremor in all, delirium in all, sleeplessness more or less marked in all, suicidal tendencies in four, various delusions and hallucinations in six, loss of power of speech in one, a systolic bruit in one, and in one case the patient had torn the conjunctiva right across in his struggles, but the wound fortunately healed, leaving no corneal opacity. Most of the cases occurred in men coming off leave where they had been drinking deeply for ten days or a fortnight ; one, a man just convalescent from pneumonia, came on after a single debauch (on rum), another in a man who, after being a teetotaler for twelve months previously, indulged in a debauch. The restless, anxious, suspicious manner, perspiring skin, loaded tongue, and quick compressible pulse, were present in all.

Treatment.—In ten out of the fourteen cases, forty-minim doses of tincture of opium with a drachm of tincture of capsicum in cinnamon-water were given, and repeated till sleep was procured (the intervals being generally three hours) ; usually three or four doses were required. In one case, attended by suicidal tendency, no medicine whatever was given, and the patient recovered rather under the average time taken by the other cases ; in one case three half-grain doses of morphia were administered ; and in two, forty-five minim doses of tincture of opium with half a drachm of tincture of hyoscyanus and the same quantity of Spiritus Ammon. aromat. were required to procure sleep. Of the three cases invalided, one was for cerebral disease, and two for heart disease.

Vertigo.—One case remained from 1868 and eight were added in 1869 : of these five were cured ; two were invalided ; one, a marine, was transferred to his own division for further treatment and one remained on the 31st December 1869. 263 days' sickness, or an average of 29·22 days per case.

Insolatio.—One case discharged cured after 21 days' treatment.

"*Cerebral Disease*" and "*Disease of Brain*."—Eleven cases admitted : of whom three were invalided ; two died ; one was sent to Yarmouth, and five remained under treatment on the 31st December 1869. 1,095 days' sickness, or 99·54 days per case.

Paralysis.—Five cases remained from 1868, and seventeen were added : five were discharged cured ; six were invalided ; three sent to Yarmouth ; one was discharged by admiral's order ; and seven remained in hospital on the 31st December 1869.

1869. 1,901 days' sickness, or an average of 86.41 days per case. There are notes of twelve cases, viz.: of one navigating lieutenant; two boatswains; two A. B's.; two captains of the hold; one sailmaker's crew; one carpenter's crew; one pensioner; one G. M. A.; one P. M.; sent from dockyard, one; Orontes, one; admitted by Admiralty order, four; Asia, one; Duke of Wellington, three; headquarters, two. In four cases the loss of power was preceded immediately by a fit; in three it came on gradually; in one case it came on after a severe blow on the head; one after rheumatism; one after syphilitic rheumatism. There were five cases of left hemiplegia; two of right hemiplegia; three of paraplegia (in one, which came on gradually, it was followed by acute mania, for which the patient was sent to Yarmouth); one of loss of power over the lower jaw; one in which there was loss of sensation in the upper and lower extremities, the power of motion remaining intact; all seem to have been of the usually chronic character, and, except the case of mania, there were no active symptoms in any during their stay in hospital.

The treatment adopted was by baths, blisters, cold lotions to the head, tonics, cod-liver oil, strychnine, bromide of potassium, and galvanism.

Cephalalgia.—Three cases remained from 1868, and three were admitted; four were discharged cured; one invalided; one remained on the 31st December 1869. 277 days' sickness, or an average of 46.17 days per case.

Dementia.—Three cases were admitted; of which one was invalided; one sent to Yarmouth Asylum, and one remained in hospital on the 31st December 1869. 143 days' sickness, or an average of 47.66 days per case.

Epilepsy.—Eleven cases admitted; of whom one was discharged cured, eight were invalided, and two remained on the 31st December 1869. 285 days' sickness, or an average of 25.91 days per case. There are notes of five cases.

Neuralgia.—Three cases remained from 1868, and eight were admitted; eight were discharged cured, and three were invalided. 600 days' sickness, or 54.54 days per case on an average.

Hemiplegia.—One case remaining from 1868, and three admitted during 1869; one was invalided; one sent to Greenwich Hospital, and two remained on the 31st December 1869. 228 days' sickness, or an average of 57.00 days per case.

Paraplegia.—One case admitted which, after ninety-eight days' treatment, remained in hospital at the end of the year.

Insanity.—One case remained from 1868, and ten were admitted during the year; eight were invalided; two discharged to Yarmouth, and one remained on the 31st December 1869. 218 days' sickness, or 19.82 per case on an average.

Melancholia.—Three cases admitted, of whom, one was discharged cured; one was invalided, and the other remained under treatment, on the 31st December 1869. 152 days' sickness, or 50.66 days per case.

Mania.—Five cases remaining from 1868 and four admitted during 1869; three discharged cured, and three invalided; three were transferred to Yarmouth Asylum; 154 days' sickness, or an average of 17.11 days per case.

Calalepsy.—One case remained in hospital from 1868, and after nineteen days' treatment the patient was allowed to go on leave.

Iritis.—A Private R.M.L.I., æt. 23, was sent from headquarters for catarrh and a secondary syphilitic eruption; iodide of potassium and mercury were given, but iritis set in. He was transferred to the surgical ward for treatment (though his case is marked "discharged cured" in the books). Twenty-one days' sickness.

Night Blindness.—One case was discharged cured after four days' treatment. No notes can be found.

Amaurosis.—Two cases admitted, both of which remained under treatment on the 31st December 1869; they caused seventy-five days' sickness, or 37.50 days per case.

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Deafness.—One case remained from 1868, and one was admitted; the former was invalided, and the latter remained on the 31st December 1869; 102 days' sickness, or an average of 51·00 per case.

Functional Disease of the Heart.—Seven cases remaining from 1868, and thirty-five admitted during 1869; of whom twenty-four were discharged cured, fourteen were invalided, and four remained on the 31st December 1869. One thousand five hundred and forty-six days' sickness, or an average of 36·81 days per case.

The cases invalided were mostly for organic disease of the heart, with complications of rheumatism, hæmoptysis, and phthisical symptoms. In five cases the disease came on after syphilis; in two, after excessive use of tobacco; pneumonia, two; rheumatism, three; chronic diarrhoea, one; dysentery, one; sun fever, one; gleet, one; gonorrhoea, one; dyspepsia & potû, one; remittent fever, one. One patient was a somnambulist. Five had been invalided from foreign stations. Six had a systolic murmur at the base of the heart, six at the apex. Two had a diastolic murmur at the base and one at the apex. A double murmur was heard at the base in two. A triple murmur in one. Tumultuous action of the heart and syncope were the chief symptoms in one man. The complications observed with this complaint were—Pleurodynia, one; scabies, one; sleeplessness, two; pericarditis, one; hæmoptysis, four; vertigo, four; startings from and disturbed sleep, three; œdema of ankles, one; syncope, two.

Of the men who were discharged cured (almost all Marine artillerymen) the cases were very trifling. Often no symptom of any kind of disease could be detected, and the appearance of the men themselves is noted as of "robust health." It is to be feared that the advent of any unusually disagreeable duty was the "exciting cause" in many of these persons.

The treatment adopted was rest, tonics and cardiac depressants, quinine-and-iron mixture with digitalis, cod-liver oil (nineteen cases); tincture of the perchloride of iron in six; chloroform in three; valerian, iodide of potassium, mercury, arsenic, belladonna, aconite, hyoscyamus; with baths, sinapisms, epithems, stupe, &c.

Organic Disease of the Heart.—Three cases remained from 1868, and ninety-two were admitted during the year 1869. Of these, three were discharged cured; sixty were invalided; five died. One (a G.M.A., affected with aneurism, who was a prisoner from Lewes, and could not therefore be brought forward for survey) was discharged by Admiralty order. Twenty-six remained in hospital on the 31st December 1869. Four thousand eight hundred and five days' sickness, or an average of 50·57 days per case.

Many of the cases were of a chronic character, with no particularly urgent symptoms; but as most of them were quite incapable of undergoing any fatigue, they were invalided out of the service.

The disease appeared after acute rheumatism in seventeen cases; gout in one case; phthisis in two; excessive use of tobacco in two; dysentery, one; gonorrhoea, three; pneumonia, 1; climatic cachexia in one; detected in prison in two; syphilis in five; bronchitis in one; aneurism in one; sun-stroke in one; yellow fever, 1; fever, 2; catarrh, 1. Nine were invalided from foreign stations. Well-marked murmurs were detected in three men on their being examined for embarkation; they were brought forward and invalided, though they considered themselves healthy, and till told of it, never suspected they had heart disease.

The Marine artillerymen who suffered from this affection attributed their disease generally to "exertions at gun drill," often saying they "felt something give way," when working the heavy guns. No mention is made in any of the notes, of inconvenience being felt from the pressure of the belts, or of any article of uniform. One man described his symptoms as though he had "two stones rubbing against each other" in his chest. With regard to the character of the objective symptoms, the patients generally appear to have been strong and healthy-looking, and as a rule very well nourished, with good colour, bright countenance, and ruddy lips. The pulse is described as jerking, sharp, sudden, and full in aortic cases; as weak, small, intermittent, and unequal in those affecting the mitral valve. Forcible heart's action could generally be felt over an

an extended region; there was very frequently increased dulness, with occasional "pushing over" of the apex beat. Dyspnoea on exertion was a universal symptom. The murmur was systolic, and heard loudest at the apex in nineteen (mitral insufficiency); systolic and loudest at base in twenty-four (aortic obstruction); a reversal of the common order of frequency of the liability of the different valves to disease; diastolic and loudest at apex in two (mitral obstruction); diastolic and loudest at base in four (aortic insufficiency). There was a double murmur in four cases, and a pericardial friction-rub in three. The complications were phthisis, 7; scabies, 2. Dyspepsia was more or less present in all, but it assumed a prominent place in the consideration of the plan of treatment to be adopted in six cases. Dyspepsia *à potu*, one; hæmoptysis, two; gonorrhœa, one; frequently recurring attacks of syncope, six; œdema of legs, two; tumour in left calf, one; epistaxis, two; pericarditis, three; ague, one (coming on for the first time in Haslar); bronchitis, one; want of sleep from frightful dreams disturbing rest, two; conjunctivitis, one; and kidney disease, one.

Treatment.—The hospital mixture of the citrate of quinine and iron was prescribed in forty-one cases, cod-liver oil in eleven, a course of alkalies in six, calomel and opium (gr. ij. ad gr. ½) in five, blisters in thirteen, digitalis in twenty-one, empl. belladonna in eleven, hyoscyamus pills in seven. Wine appears to have been given only to two patients, and brandy to one. Iodide and bromide of potassium, colchicum, squills, chloroform, aconite, arsenic, elaterium, sinapisms, stupes, fomentations, &c., were all occasionally employed to meet particular symptoms.

Pericarditis.—There was one case remaining from 1868, and three admitted; one was discharged cured, one invalided, and two transferred to the surgical wards; sixty-nine days' sickness, or an average of 17·25 days per case.

Aneurism.—Ten cases were admitted, of whom five were invalided, four died, and one remained on the 31st December 1869; 405 days' sickness, or an average of 40·50 days per case.

Dropsy.—Two cases; both invalided after 105 days' sickness, or an average of 52·50 days per case. An A. B., æt. 28, admitted from the Victoria and Albert, with ascites, gradually passing into general dropsy following remittent fever, during which there had been sloughing over the sacrum and hips; he was treated by diuretics, quinine, opium, stimulants, &c., and discharged cured in three weeks.

Anasarca.—Three cases were admitted, of whom two were cured and one died; 140 days' sickness, or an average of 46·67 days per case.

Edema.—Two cases; one discharged cured and one transferred to the surgical wards. Sixty-nine days' sickness, or 34·50 per case.

Congestion of the Lung.—One case, discharged cured after twenty-one days' treatment. It occurred in the person of a Coastguard boatman, and appears really to have been a case of pneumonia of the whole of the left lung, and not progressing very rapidly; the man having no home he was sent to Haslar for the comfort of the hospital. Under good diet, tonics, and cod-liver oil, he soon recovered.

Hæmoptysis.—Four cases, which were all discharged as "cured," caused 148 days' sickness, or 37·00 days per case on an average. Their ratings were: boys, two; private R. M. L. I. 1, gunner R. M. A. 1; the cases of the boys and the marine appear to have been of a very slight nature, scarcely presenting any phthisical symptoms; in one of the boys the blood-spitting came on after acute rheumatism with pericardial complication. The gunner had more serious symptoms; it was a second attack, the first having occurred a month previously; he remained sixty-six days under treatment, taking tonics and quinine and iron, but made little constitutional progress, and from his subsequent history it appears that he was invalided.

Influenza.—There was a single case remaining from 1868, discharged cured after thirty-two days' treatment.

Aphonia.—One case discharged cured after ten days' treatment.
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Catarrh.—Ten patients remained from 1868, and twenty-seven were admitted in 1869; of whom twenty-two were cured and fifteen were invalided. 1,645 days' sickness, or an average of 44·46 days per case.

The complications were: phthisis in fifteen cases; pericarditis, one; rheumatism, three; suspected scarlet fever, but which turned out to be simple catarrh, four; climatic cachexia, one; mitral disease, one; albuminuria, one; sore throat, eight; chronic enlargement and ulceration of tonsils, eight; urticaria, one; hæmoptysis, seven; paroxysms of severe dyspnoea, one; syphilis, three; gastric irritation and vomiting, one; herpes, one; systolic murmurs, two; aphonia, one; pneumonia, two; tapeworm, one.

The cases invalided were, for phthisis, eight; morbus cordis, three; oblique inguinal hernia, one; hæmoptysis, one; syphilitic rheumatism, one; chronic rheumatism, one. The remainder of the cases were of a very trivial nature, and requiring but rest, salines, and Dover's powder at bedtime. One man stated that, five months previously, whilst firing at Browndown, his right testicle was drawn up into the canal, and had remained there; not giving him any trouble, it was not considered necessary to interfere with it. The treatment in the men invalided was adapted to the prominent symptoms, viz., cod-liver oil (being used in thirteen cases), quinine, iron, salines, tonics, blisters, sinapisms, gargles, steam to the throat, solution of nitrate of silver to enlarged tonsils, and oil of male fern for tænia, were all employed as occasion demanded.

Bronchitis.—Seven cases remained from 1868, and thirty were added in 1869; eighteen of these were cured, ten invalided, two died, and two were transferred to the surgical wards, and five remained on the 31st December 1869: 1,812 days' sickness, or an average of 48·98 days per case.

Four were invalids from foreign stations.

Of the ten men considered unfit for the service, six were invalided for phthisis, two for morbus cordis, one for morbus cordis and dropsy, one for asthma. One man was transferred to the surgical wards for a small but deep ulcer on the tibia.

Complications.—Ten of these patients had hæmoptysis, and four, other symptoms of phthisis; one, had emphysema; one, a discharge from the right ear. In only one case did the fever run high, or was there delirium; four, had sore throat; one, bloody urine; one, bubo; one, deafness; one, diarrhoea; one had a systolic and one a diastolic murmur; one, anasarca; one, pericarditis; one, asthma; one, primary syphilis, and two, rheumatism.

As usually happens in this disease, the sufferers were amongst the oldest portion of the men in the service, generally of worn constitutions and who had long suffered from chronic, or been subject to subacute attacks. Almost all the symptoms were of a low type; there was little fever in any; the most urgent complaints appear to have been the shortness of breath, cough, and constant spitting of purulent mucous blood-tinged matter, disturbed sleep, dyspnoea amounting to orthopnoea, tightness and pain across the chest in front and aching of the shoulders, a tight parietal headache, and depression of spirits. Generally there was but trifling dulness on percussion, but the "ronchus sibilus," with "cooing" and "whistling" were well marked. It is noted that one man had "slight comparative dulness over lower third of the left lung, with curious ægophonic resonance;" all of which symptoms gradually passed off before he was discharged as cured.

Treatment.—Cod-liver oil was given in eighteen cases; tonics, the citrate of quinine and iron, gentian and tincture of the perchloride of iron salines, stimulating expectorants, squills, nitre, digitalis, oxide of zinc, blue pill, æther, chloroform, liquorice, were administered, and blisters, stupes, sinapisms, &c. were applied to the chest. Chronically enlarged tonsils were painted over with twenty-grain solutions of nitrate of silver, and nitre and stramonium cigars were used for asthma. Wine only seems to have been given in one case.

Asthma.—One case remaining from 1868, and one admitted in 1869; the former was discharged invalided, and the latter (a midshipman) was allowed to go on leave. The duration of each case was between twenty-five and twenty-six days. (1.) A gunner, R. M. A., æt. 20, was sent in from headquarters suffering much from severe paroxysms of asthma; he stated that the disease was hereditary

hereditary in his family. In November 1868 he had been invalided from the West Indies for a loose cartilage in the kneejoint, and the chest disease became worse on getting into cold weather. In Haslar he was treated by antispasmodics and tonics, but does not seem to have improved much, and was subsequently invalided. (2.) A midshipman, æt. 15, invalided from Malta on the 25th November 1868, for hereditary asthma, from which he had suffered more or less since he was three years old; when serving lately, in the Mediterranean, the paroxysms had been of unusual severity. In Haslar he was treated by lobelia, chloroform, and various antispasmodics, with material benefit, and after twenty-three days' stay was allowed to go on leave to try the benefit of his home air.

Pneumonia.—Six cases remained from 1868, and forty-five were added during 1869; of whom thirty-two were discharged as cured, six were invalided, eight died; one was sent to Greenwich, and four remained under treatment on the 31st December 1869: 1,610 days' sickness, or an average of 31·56 days per case.

The disease came on, after rheumatism, once; syphilis, once; bubo, twice; secondary syphilis, once. Of the six men invalided, five, were for phthisis, and one, for the "effects of pneumonia." The man recommended for Greenwich Hospital had phthisis and albuminuria.

The disease attacked both lungs in six cases, and was confined to one lung in thirty, attacking the whole of the left lung in three, the lower three quarters of the left in two, lower half of left in seven, and lower lobe of left in five; lower lobes of both in three; lower half of both in one; lower one-third of both in one; lower lobe of right, in two; lower one quarter of right in one; lower half of the right in eight; lower three quarters of the right, in two. There was fever in nearly all; rusty sputa in twenty-four. The sputa was tenacious and mucous in three, and mucopurulent in nine. There was delirium in seven cases only. It will be noticed that the usual proportion of right and left pneumonias (two to one) is reversed in these cases (as three to four) and the proportion of double cases to single ones is in excess, one to six instead of one to eight, of that usually observed.

Complications.—Pleurisy in four; œdema of feet and ankles, 1; constant vomiting, four; albuminuria, one; rheumatism, two; "roselous eruption," one; jaundice, one; continued drowsiness, one; ulceration of tonsils, one.

Treatment.—Antimonial salines with counter irritation, followed by tonics and nourishing diet, was the scheme followed out. Bleeding to 3xx had been practised in one case with negative results. In two cases four leeches were applied to relieve the pleuritic pain, also with negative results. Almost all the patients took the saline antimonial draughts, and had the Service lime-juice diluted as a drink. Cod-liver oil was prescribed in eleven cases; mercury was used four times; blisters, sinapisms, fomentations, stupes, poultices, emetics, stimulating expectorants, syrup of the iodide of iron, iodide of potassium, decoction of cinchona, mistura spiritus vin. Gall. (once); digitalis, turpentine, chloride of potash gargles, solutions of nitrate of silver, for throat, &c., were all brought into use to meet symptoms. Wine (five ounces daily) appears to have been given in three cases only.

Many of the attacks seem to have been of very slight character, and readily yielded to the treatment adopted. The more severe ones were of a low type, and followed by great prostration and prolonged defervescence. There appeared to have been an absence of spontaneous diarrhoea during convalescence.

Pleurisy.—One case remained from 1868, and three were admitted in 1869. Three were discharged cured, and one was invalided. 134 days' sickness, or an average of 33·50 per case.

Pleurodynia.—Five cases were admitted, of whom four were cured, and one was invalided; caused 157 days' sickness, or 31·40 per case.

Pertussis.—One case, a quartermaster, æt. 40, admitted with well-marked symptoms of the disease, the origin of which he could not account for; a fortnight after admission he had a slight attack of hæmoptysis, but eventually regained strength and health, and was discharged "cured."

Appendix.

Effects of Drinking.—A Marine who formerly had an attack of delirium tremens was the subject of symptoms ascribable to excessive drinking.

Dysanthe.—Two cases remained from 1868, and twenty were admitted in 1869, all of whom were cured; 615 days' sickness, or an average of 29·96 days per case. In fifteen cases the inflammation extended over the fauces and both tonsils. In one, there was suppuration of left tonsil; in one suppuration of right tonsil; redness of fauces only in one; ulceration of gums in one; rash resembling chicken-pox in one; itch, one; one man had some of the premonitory symptoms of scarlet fever, but they came to nothing; he had been five times in Haalar previously for throat affection; foetor of breath in three; excoriations about anus in one; hæmoptysis in one; bubo, one; syphilis, one; gonorrhoea, one; phthisis, one; coryza, one; urticaria, two; and aphthæ of tonsils, one; one case, after being cured of this disease, was transferred to the surgical ward for gonorrhoea. The usual symptoms were dysphagia, fever generally slight, but in a few cases somewhat severe; deafness, nausea, and debility; faucial voice and ringing in the ears is also noted. There was not a single case of glandular complication.

Gastritis.—One case of, remained under treatment on the 31st December 1869, having been then seventy-three days in hospital.

Gastralgia.—Two cases, of which one was cured and one was invalided, caused 153 days' sickness, or an average of 76·50 days per case.

Chronic Vomiting.—One case remained in hospital on the 31st December 1869, after twenty-two days' treatment.

Dyspepsia.—One case remained from 1868, and twenty-nine were admitted in 1869; of whom twenty-four were cured, two invalided, one transferred to the surgical ward, and three remained at the end of the year; 1,139 days' sickness, or an average of 37·97 days per case.

Eight of the patients appear to have been labouring under incipient delirium tremens, or dyspepsia à potu, of whom three were sufficiently severe to present well-marked delirium, hallucinations, tremors, and sleeplessness, and to be classed as delirium tremens; one was a case of suspected aneurism of the abdominal aorta, but it does not seem to have been clearly made out as such; two were cachectic invalids from China; the symptoms commenced after an attack of dysentery once, rheumatism once, ague once, phthisis once, hæmoptysis once. Diarrhoea, one; pericarditis, one; palpitation, one; enlarged heart, one; syphilis, one; pneumonia, one; a fall on board Euryalus, one; melancholia, one. It was complicated with eczema in one case; with hæmorrhoids in one case; phthisis, one; prolapsus ani, one; contracted liver, one; and in one patient no objective symptoms whatever could be discovered. The symptoms were various; epigastric pains, vomiting, flatulence, irregularity of the bowels, frontal headache, with loaded tongue and offensive breath, a weak quick pulse, and dry harsh state of skin (except in the delirium tremens cases), depression of spirits, fullness at epigastrium, and anorexia, appear to have been the most constant complaints.

Dysentery.—One case remained from 1868, and thirteen were added in 1869, of whom seven were discharged cured, four were invalided, and one was transferred to the surgical wards; 625 days' sickness, or an average of 44·04 days per case.

Diarrhoea.—Two cases remaining from 1868, and ten added; eight of whom were discharged cured, two were invalided, one was transferred to the surgical wards, and one remained on the 31st December 1869; 457 days' sickness, or an average of 38·08 days per case.

Constipation.—Two cases, one discharged cured, and one remaining under treatment on the 31st December 1869, caused 113 days' sickness, or 56·50 per case on an average.

Colic.—Two cases, both cured, caused forty days' sickness, or an average of twenty days per case.

Worms.—One case, a gunner's mate, æt. 39, who had been invalided from China from Serpent for dysentery, had been long troubled with tapeworm; one
single

single dose of six ounces of the infusion of kousso removed the entire parasite, and the man was discharged cured after nine days' treatment. Although only one case appears under this heading, it very commonly occurred that, during the year, patients admitted for other diseases complained of having tapeworm, and were relieved of the parasite by some oil of male fern or kousso. The prevalence of this disease amongst the sailors is doubtless due to the practice of very many men on the lower deck, composed of men long in the Navy, taking up their allowance of pork raw to eat during the night-watches, under the popular belief that the "fat" went further, "and kept out the cold" better in that way.

Peritonitis.—One case remaining from 1868, and three admitted during the year 1869; of whom two were invalided, one died, and one remained under treatment; 226 days' sickness, or an average of 56.50 days per case.

Enteritis.—Four cases were admitted, of whom two were discharged cured, one died, and one remained on the 31st December 1869; sixty-three days' sickness, or an average of 15.75 days per case.

Hepatitis.—One case remaining from 1868, and fourteen added during the year, of whom thirteen were discharged cured, and two were invalided; 614 days' sickness, or an average of 40.94 days per case.

Icterus.—One case remained from 1868; eleven cases were admitted, of whom nine were discharged cured, two died, and two remained on 31st December 1869; 351 days' sickness, or an average of 27.59 days per case.

Disease of Stomach.—One case remained from 1868 under treatment for forty-six days, and was then discharged, cured.

Bright's Disease.—Two cases, both discharged cured, caused fifty days' sickness, or an average of twenty-five days per case; a gunner R. M. A., sent in from headquarters, who had "for a long time" been suffering from a pain in the back, and had been passing large quantities of pale acid urine of low specific gravity, containing no sugar, but a small and varying quantity of albumen. He appeared to have caught additional cold, which rendered him unable to follow his duties. Since his admission there were no urgent symptoms; he had slight anasarca, pain in the region of the kidneys of a dull character; was passing pale, feebly, acid urine of grav. 1013 containing a trace of albumen, and a deposit of mucus and scattered pus corpuscles; he also had a stricture of the urethra; under the use of baths, tonics, and iron and quassia he rapidly improved, and was discharged cured, after twenty-five days' treatment.

Albuminuria.—Nine cases admitted, of whom four were cured, one invalided, and four remained under treatment on the 31st December 1869; 438 days' sickness, or an average of 48.67 days per case.

Nephritis.—Four cases were admitted, three discharged cured, and one remained under treatment on the 31st December 1869; 282 days' sickness, or an average of 70.50 per case.

Incontinence of Urine.—One case remained in hospital from 1868, and one was added; the former was discharged cured, and the latter invalided. Forty-two days' sickness, or an average of twenty-one days per case.

Hæmaturia.—Two cases were admitted; one was discharged cured, and one died; 121 days' sickness, or an average of 60.50 days per case.

Retention of Urine.—One case admitted and discharged cured, after seventeen days' treatment.

Cystitis.—Two cases were admitted; one was discharged cured, and one died. Sixty-six days' sickness, or an average of thirty-three days per case.

Ascites.—Three cases admitted, of whom one was invalided, and two died; 172 days' sickness, or an average of 57.33 days per case.

Cozalgia.—One case transferred to the surgical ward after twenty-nine days' treatment.

Appendix.

Disease of the Spine.—Two cases were admitted, and both discharged cured, after sixty-four days' treatment, or an average of thirty-two days per case.

Porrigio.—One case under treatment for eighty-four days, and then invalided.

Urticaria.—One case remained under treatment on the 31st December 1869.

Debility.—Four cases remained from 1868, and fifty-four were admitted in 1869. Thirty-eight were discharged cured; seven invalided; two died; one was allowed to go on leave; one was transferred to the surgical ward, and nine remained in hospital on the 31st December 1869; 1,684 days' sickness, or an average of 29.04 days per case.

The complications were,—				Cases.		Cases.
Palpitation in	-	-	-	4	Sloughing pharyngeal ulcer	- 1
Diarrhoea	-	-	-	1	Prolapsus ani	- - 1
Vertigo	-	-	-	5	Hæmorrhoids	- - - 1
Dimness of sight	-	-	-	1	Sea sickness	- - - 1
Nervousness	-	-	-	3	Despondency	- - - 1
Loss of memory	-	-	-	2	Optical delusions	- - - 1
Epistaxes	-	-	-	1	Pleurodynia	- - - 1
Convulsive twitchings	-	-	-	3	Rheumatism	- - - 1
Coldness of extremities	-	-	-	1	Amentia and want of control	
Psoriasis	-	-	-	1	over sphincters	- - - 1
Left inguinal hernia	-	-	-	1	Sycosis menti	- - - 1
Dislocation	-	-	-	1	Scrofulous glands	- - - 1
Spinal disease and ill-formed chest	-	-	-	1	Syncope	- - - 2

The other cases were all of the usual character, and nothing special deserving of notice was recorded beyond the complications enumerated above.

Senility.—There were seven cases under this heading, of whom one is set down as discharged "cured," one died, and five remained in the hospital on the 31st December 1869. There were 651 days' sickness from this cause, or an average of ninety-three days per case.

SURGICAL REPORT
OF THE
ROYAL NAVAL HOSPITAL, HASLAR,
FOR THE YEAR 1869,
BY
DEPUTY INSPECTOR GENERAL THOMAS NELSON, M.D.
AND
STAFF SURGEON JAMES NICHOLAS DICK.

TABLE showing the Number of Cases of the different Forms of Disease admitted, with their Results, the Duration of their Treatment in Hospital, and the Manner of their Termination.

NAME OF DISEASE.	Number of Cases.	Total Number of Days.	Average Number of Days.	How disposed of.						Remaining in Hospital.	
				Duty.	Invalided.	Dead.	To Medical Wards.	To Greenwich Hospital.	By Admiralty Order.		
I. General Diseases, Section A. :											
Erysipelas - - -	13	282	21·6	8	-	2	-	-	-	3	
II. General Diseases, Section B. :											
Primary Syphilis - -	328	14,246	43·3	281	1	-	5	-	-	41	
Secondary Syphilis - -	132	5,867	44·4	106	6	-	3	-	-	17	
Scrofula - - -	11	552	50·1	5	4	-	-	-	-	2	
III. Diseases of the Nervous System and Organs of the Special Senses :											
Ammaurosis - - -	4	275	68·5	-	-	-	-	-	-	4	
Cataract - - -	1	26	26·	-	1	-	-	-	-	-	
Iritis - - -	6	282	47·	5	1	-	-	-	-	-	
Ophthalmia - - -	26	1,359	52·2	20	3	-	-	-	-	3	
Sclerotitis - - -	1	14	14·	1	-	-	-	-	-	-	
Cerebral Concussion -	6	151	25·1	3	1	1	-	-	-	1	
Diseases of the Ear - -	7	210	30·	2	5	-	-	-	-	-	
Paralysis - - -	1	87	87·	-	-	-	1	-	-	-	
IV. Diseases of the Circulatory System :											
Aneurism - - -	1	53	53·	1	-	-	-	-	-	-	
Varix - - -	1	18	18·	1	-	-	-	-	-	-	
V. & VI. Diseases of the Absorbent System and Ductless Glands :											
Sympathetic Bubo - -	22	950	43·1	18	-	-	-	-	-	4	
Adenitis - - -	2	144	72·	2	-	-	-	-	-	-	
VIII. Diseases of the Digestive System :											
Glossitis - - -	1	26	26·	1	-	-	-	-	-	-	
Chronic Tonsillitis - -	1	28	28·	-	1	-	-	-	-	-	
Hernia - - -	4	76	19·	1	2	-	-	-	-	1	
Hæmorrhoids - - -	5	295	59·	5	-	-	-	-	-	-	
Fistula in Ano - - -	8	354	44·2	4	1	-	-	-	-	3	
Stricture of Rectum - -	1	182	182·	-	-	-	-	-	-	1	

PART II.—TABLE showing the Number of Cases of the different Forms of Diseases, &c.—*contd.*

NAME OF DISEASE.	Number of Cases.	Total Number of Days.	Average Number of Days.	How disposed of.						Remaining in Hospital.	
				Duty.	Invalided.	Dead.	To Medical Wards.	To Greenwich Hospital.	By Admiralty Order.		
IX. & X. Diseases of the Urinary and Generative Systems :											
Incontinence of Urine -	2	128	64	-	1	-	-	-	-	-	1
Retention of Urine -	1	18	18	1	-	-	-	-	-	-	-
Urinary Fistula -	1	67	67	1	-	-	-	-	-	-	-
Stricture of Urethra -	21	828	39.4	14	1	1	1	-	-	-	4
Balanitis -	1	46	46	1	-	-	-	-	-	-	-
Gonorrhœa -	152	4,496	29.5	132	2	-	5	-	-	-	13
Hydrocele -	9	484	53.7	8	1	-	-	-	-	-	-
Orchitis -	49	1,491	30.4	41	2	-	-	-	-	-	6
XI. Diseases of the Organs of Locomotion :											
Diseases of the Bones -	10	611	61.1	1	3	-	-	-	-	-	6
Diseases of the Joints -	11	880	80	4	4	-	-	-	1	-	2
Diseases of the Bursæ -	2	63	31.5	2	-	-	-	-	-	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :											
Phlegmon and Abscess -	43	2,961	68.8	34	3	1	-	-	-	-	5
Ulcer -	93	3,896	41.8	69	9	-	2	1	-	-	12
Onychia -	3	67	22.3	3	-	-	-	-	-	-	-
Warts -	1	14	14	1	-	-	-	-	-	-	-
Eczema -	7	189	27	6	-	-	-	-	-	-	1
Erythema -	1	27	27	1	-	-	-	-	-	-	-
Ecthyma -	1	39	39	1	-	-	-	-	-	-	-
Herpes -	3	88	19.3	3	-	-	-	-	-	-	-
Ichthyosis -	1	35	35	-	-	-	-	-	-	-	1
Impetigo -	5	145	29	5	-	-	-	-	-	-	-
Lichen -	1	5	5	1	-	-	-	-	-	-	-
Psooriasis -	7	374	53.4	6	-	-	-	-	-	-	1
Tinea Sycoia -	1	38	38	1	-	-	-	-	-	-	-
Scabies -	8	165	20.6	7	-	-	-	-	-	-	1
Unclassed :											
Tumour -	3	73	24.3	3	-	-	-	-	-	-	-
Wounds and Injuries :											
Wounds -	34	1,385	40.7	26	2	1	-	-	-	-	5
Fractures -	40	1,800	45	24	2	2	-	-	-	-	12
Dislocations -	1	27	27	1	-	-	-	-	-	-	-
Sprains -	9	409	45.4	6	2	-	-	-	-	-	1
Contusions -	26	1,156	44.4	22	1	-	1	-	-	-	2
Burns and Scalds -	5	93	18.6	5	-	-	-	-	-	-	-
Amputation -	2	162	81	-	1	-	-	1	-	-	-
GRAND TOTAL -	1,136	47,716	42.0	894	60	8	18	2	1	-	153

SURGICAL REPORT

OF THE

ROYAL NAVAL HOSPITAL, HASLAR,

FOR THE YEAR 1869,

By Deputy Inspector General THOMAS NELSON, M.D.

AND

Staff Surgeon JAMES NICHOLAS DICK.

REMARKS on the foregoing Table.

Primary Syphilis.—One patient while under treatment for this disease was invalidated for deafness, which he attributed to having had a gun fired close to this ear.

Cataract.—A case of the lenticular variety; left eye, not suitable for operation.

Iritis.—A case invalidated had its origin in syphilis; right eye. The patient had suffered from repeated attacks. Of the five cases sent to duty, one was of the rheumatic variety, two of the syphilitic, and in two the cause was not apparent. In three instances the right eye was involved, in one the left, and in one both eyes.

Diseases of the Ear.—Five cases were invalidated, all being attended with otorrhœa. In one the origin was ascribed to prolonged exposure to cold, one, depended on struma, one, was associated with rheumatism, the patient being also the subject of chronic pericarditis; and in two the cause was unknown.

Aneurism.—A case of aneurism of the left popliteal artery was successfully treated by the application of a conical 10½ lbs. weight to the groin.

Chronic Tonsillitis.—A case of enlargement of both tonsils of six years' duration; portions of them were removed, but with little benefit. This patient was also the subject of cataract of the right eye, the result of a wound received three years previously.

Hernia.—Two cases were invalidated. (a.) Reducible inguinal hernia, caused by violent effort when working on board ship. (b.) Reducible inguinal hernia of the left side, with an incipient tumour on the right, occurring in a delicate boy, the abdominal rings being naturally weak, and the calibre of the inguinal canals unusually large.

Fistula in Ano.—Four cases were cured; three of the complete variety and one of the blind external. In all, the sphincter ani was divided by means of a bistoury and cures resulted. One case was invalidated. This patient was suffering from phthisis, and the case did not promise to be successful if operated on.

Retention of Urine.—A case depending on atony of the bladder after fever.

Stricture of the Urethra.—Fourteen cases discharged cured. Ten were of the organic variety, three of the spasmodic, and one was a case probably of very temporary spasm, as no obstruction could be detected during the patient's stay in hospital. Eight were situated anterior to the bulb and five in the membranous portion of the urethra. The case invalidated was one of organic stricture of many years' standing, occurring in a man aged 44. When admitted he was suffering from extensive extravasation of urine into the perinæum and scrotum.

One death occurred. An invalid was received from Japan who had been the subject of stricture for fifteen months previously, during nearly the whole of which time he had neglected it. On admission into hospital he was found to have extensive disease of the prostate, bladder, and ureter, with renal abscess, which state of things proved fatal about two months after his arrival.

Appendix.

Gonorrhœa.—The two patients mentioned as having been invalidated were suffering respectively from varicocele and chronic rheumatism with cachexia.

Hydrocele.—A case of hydrocele was invalidated, because the patient (a boy) peremptorily refused to submit to paracentesis. Eight cases were cured. Six involved the left serous membrane and two the right. The origin of six could be traced to local injuries. Four were attended by orchitis, and seven were radically cured by a single operation of "tapping," and the immediate injection of one drachm of Tr. sodi comp. In one case of long standing the "tapping" and injection were twice had recourse to at an interval of fifteen days before a permanent cure resulted.

Diseases of the Bones.—Three cases were invalidated. (a.) Caries of gladiolus sterni, of two years' standing; the result of a blow. (b.) Necrosis of the right tibia, the result of an injury. Repeated operations for the removal of sequestra had been practised prior to admission, but much enlargement of the bone remained. (c.) A precisely similar case to the preceding, but the patient also suffered from disease of the aortic valves. The case discharged cured was caries of the last phalanx of the little finger, resulting in granulation.

Diseases of the Joints.—Four cases were invalidated. (a.) One in consequence of ankylosis of hip joint, resulting from a severe contusion. A second, organic disease of the knee joint, caused apparently by an injury received 2½ years previously. The third was chronic scrofulous disease of the knee joint; and the fourth presented symptoms such as might be expected in cases where one of the semilunar cartilages was dislocated.

Diseases of the Bursa.—Two cases were cured; causes not apparent. (a.) Enlarged bursa over the olecranon of six weeks' standing, cured by the application of blisters and subsequent dressing with ung. hydr. comp. (b.) Enlarged housemaid's bursa of a week's duration, which succumbed to the topical application of Lin. sodi. comp., and the internal administration of potassii solum.

Abscess.—One case terminated fatally; the abscess being situated over the tenth and eleventh intervertebral spaces of the left side, of about a year's standing.

Ulcer.—About seven-tenths of the cases of ulcer were situated on the lower extremities.

Tumour.—Three cases were cured; two of them by excision. The first was epithelioma of lower lip. Second, a similar tumour on bridge of nose. The third, a hard tumour, situated on ensiform cartilage, disappeared spontaneously.

Wounds.—One death occurred; a suicidal wound of the throat inflicted by a razor. Gunshot wound of left leg, resulting in lameness; the patient was also the subject of phthisis.

(a.) Incised wounds, five in number. A slight wound of the calf, accidentally caused by a knife; one on the outer side of the leg, caused by an adze; two on the sole, occasioned by the patients stepping on some sharp object while bathing; and a self-inflicted wound of the throat, extending from about an inch left of the mesial line to the back of the right ear, completely dividing the larynx immediately above the thyroid cartilage, but missing the large vessels; the injured larynx was united by two sutures, and no bad symptoms occurred.

(b.) Fourteen lacerated wounds. Three of the fingers, one of the palm, four of the toes, two of the scalp over the occiput, one of the eyelid, one of the chin, the tip of the tongue having been severely bitten; one of the cheek and eyebrow, and a slight wound of the perineum, the patient having fallen across the crutch of a boat.

(c.) Six contused wounds. One of the dorsum of the foot, one of the toes, one of the shin, one of the knee, one of the hand, and one over the eye.

(d.) Punctured wounds. One of the foot, between the great and second toes, occasioned by the patient having trodden on a nail which nearly passed through the foot.

Fractures.—Two deaths. (a.) Fracture of the base of the skull, with laceration of the left anterior lobe of the brain. (b.) Comminuted fracture of the left tibia and fibula. The cause of death in this case was the sudden escape by rupture of a large quantity of blood into the right pleural cavity. Two cases were

were invalided. (a.) Compound fracture of the middle third of the right femur, received three months before the patient's admission into hospital; the result was a shortening of two inches. (b.) Fracture of the right radius, and dislocation of the ulna resulting in deformity. Twenty-four cases were cured.

- (a.) *Tibia*—right, simple, transverse; at junction of middle and lower thirds.
- (b.) *Ribs*—two ribs of the right side.
- (c.) *Acromion*—treated with Ellis' apparatus.
- (d.) *Radius and Ulna*—left, simple, transverse; at junction of middle and lower thirds.

- (e.) *Tibia*—right, simple; in lower third.
- (f.) *Tibia and Fibula*—left; immediately below the tubercle of the tibia, and in upper fourth of fibula.

- (g.) *Humerus*—left, inner condyle broken off obliquely; treated with figure-of-8 bandage and rectangular splint.

- (h.) *Patella*—left, simple oblique; caused by direct violence.

- (i.) *Femur*—right, simple transverse, middle third; Liston's splint.

- (j.) *Patella*—left, simple transverse; direct violence; great swelling, and ecchymosis; no apparatus could be applied for a fortnight; treated by pads approximated with strapping, subsequently starch bandage; close and firm ligamentous union.

- (k.) *Fibula*—right, simple; about two inches above external malleolus; dislocation of foot inwards.

- (l.) *Pelvis*—extensive fracture of the descending ramus of the right pubes, attended with great collapse. After the accident there was severe hæmorrhage from the urethra, and blood was passed with the urine for three days subsequently, the escape being attended with a smarting sensation in the urethra; ice-bladder to pubes, rest, enemata, catheterism, &c.

- (m.) *Tibia and Fibula*—right, simple transverse, in the lower third of the leg.

- (n.) *Ribs*.—The sixth, seventh, and eighth ribs on the right side.

- (o.) *Tibia*—left, simple transverse, four inches above the malleoli.

- (p.) *Femur*—right, simple, lower third; Liston's splint.

- (q.) *Clavicle*—right, near the acromial extremity; caused by a fall on the shoulder.

- (r.) *Tibia and Fibula*—right, compound, at the junction of the middle and lower thirds; carbolic acid paste to the wound, from which there was no subsequent discharge; Salter's swing.

- (s.) *Ulna and Radius*—simple, fracture of the right bones.

- (t.) *Fibula*—right, simple, through the malleolus.

- (u.) *Finger*—last phalanx of left little finger, compound comminuted; removal of phalanx.

- (v.) *Femur*—right, simple, junction of the upper with the middle third; Liston's splint.

- (w.) *Toe*—right great toe, compound, distal phalanx; protruding bone removed with cutting forceps.

- (x.) *Toe*—left, simple, first phalanx of great toe.

Dislocation.—A case of dislocation of the right patella, inwards; easily reduced.

Contusions.—One case invalided. Severe contusion of the elbow; the joint became ankylosed, and the limb consequently useless.

PART III.

A TABULAR STATEMENT of the SURGICAL OPERATIONS performed during the Year 1869

Name of Operation.	Disease or Injury necessitating the Operation.	Nature of the Operation.	Result.
Amputation of finger	Lacerated wound of the second finger of the right hand, the whole of the soft parts covering the last phalanx having been torn away.	Amputation; a flap being formed from the dorsal side of the finger; the last phalanx and the head of the second being removed.	Good; the stump healed favourably.
Paracentesis in hydrocele.	Eight cases of hydrocele	Paracentesis and injection of the strong Tr. Iodi. co.	Radical cures.
Operation for fistula in ano.	Three cases of complete fistula, and one of blind external fistula.	Division of the sphincter ani	Permanent cures.
Excision of tumour	Epithelioma of the lower lip in a man aged eighty-two, about the size of a hazel nut, and of three months' growth.	Excision by a V-cut, the wound being brought together by twisted suture and collodium.	Cure; no record of any return of the disease.
Excision of tumour	Epithelial tumour, about the size of a marble, on the bridge of the nose; three weeks' duration.	Removal by semi-elliptical incisions; silverwire sutures applied.	Permanent cure.
Removal of necrosed bone.	Necrosis of the shaft of the tibia succeeding an injury of the leg, in a boy aged fifteen; the shaft of the femur was also diseased.	An incision was made from the malleolus internus, half way up the leg along the inner edge of the tibia, and several pieces of necrosed bone removed by gouge and forceps.	Temporary benefit; the patient was subsequently invalided.

N.B.—It is somewhat remarkable that no capital operation took place in the Hospital during this year.

MEDICAL AND SURGICAL REPORTS
OF THE
ROYAL NAVAL HOSPITAL, PLYMOUTH,
FOR THE YEAR 1869.

UNDER THE CHARGE OF
INSPECTOR GENERAL JOHN DAVIDSON, M.D., C.B.

SURGICAL REPORT

BY
DEPUTY INSPECTOR GENERAL ROBERT BERNARD, M.D., B.A.,
Honorary Surgeon to Her Majesty.

TABLE, No. 1.

SHOWING the Total Number of each Disease under Treatment during the Year 1869,
with the Result.

CLASS.	DISEASES.	In Hospital on 31st Dec. 1868.	Admitted in 1869.	Discharged.			Dead.	Remaining 31st Dec. 1869.	Total Number of Days under Treatment.	Mean Duration of Treatment in each Case.
				Cured.	Relieved.	Invalidd.				
General Diseases -	Erysipelas - - -	2	13	14	-	-	-	1	506	33·7
	Syphilis, Primary - -	31	261	265	-	5	-	22	12,155	41·6
	„ Secondary - - -	20	148	130	-	21	1	16	7,230	43·0
	Scrofula - - - -	-	14	5	1	7	-	1	1,091	77·2
Nervous System and Organs of Sense.	Neuralgia - - - -	-	2	-	-	-	-	2	45	22·5
	Diseases of Eye - -	1	31	26	1	4	-	1	970	30·3
	Diseases of Ear - -	1	9	4	-	3	1	2	302	30·2
	Diseases of Nose - -	-	3	2	-	-	-	1	222	74·0
Circulatory System and Absorbents.	Organic Disease of Heart -	1	-	-	-	-	1	-	1	1·0
	Aneurism - - - -	-	2	1	-	1	-	-	97	48·5
	Varicose Veins - - -	-	10	7	-	2	-	1	486	48·6
	Bubo (<i>Symp.</i>) - - -	3	21	20	-	-	-	4	650	27·0
Digestive System -	Hæmorrhoids - - - -	-	6	5	-	-	-	1	107	17·8
	Fistula in Ano - - -	3	6	7	-	1	-	1	471	62·3
	Prolapsus Ani - - -	-	1	-	-	1	-	-	99	99·0
Of the Urinary and Ge- nerative Systems.	Bright's Disease - - -	-	1	-	-	-	1	-	9	9·0
	Incontinence of Urine -	1	3	2	-	2	-	-	79	19·7
	Cystitis - - - - -	-	2	2	-	-	-	-	57	28·5
	Calculus - - - - -	-	2	2	-	-	-	-	122	61·0
	Gonorrhœa - - - - -	11	241	235	-	2	-	15	8,417	33·4
	Paraphymosis - - - -	-	1	1	-	-	-	-	7	7·0
	Epididymitis - - - -	-	4	4	-	-	-	-	84	21·0
	Orchitis - - - - -	1	15	16	-	-	-	-	541	33·8
	Stricture - - - - -	4	50	42	-	7	1	4	2,024	37·4
	Fistula in Perinæo - -	-	1	1	-	-	-	-	99	99·0
	Hydrocele - - - - -	4	8	10	-	-	-	2	467	38·9
	Varicocele - - - - -	-	3	2	-	1	-	-	85	28·3
Organs of Locomotion -	Diseases of Bones - -	3	7	6	-	2	1	1	669	66·9
	Diseases of Joints - -	4	15	12	-	7	-	-	686	36·0
	Diseases of Bursæ - -	-	2	2	-	-	-	-	27	13·5
Cutaneous System -	Phlegmon and Abscess -	6	64	57	1	3	1	8	2,352	33·6
	Skin Diseases - - - -	6	70	69	-	-	-	7	2,117	27·8
	Ulcers - - - - -	27	181	166	2	32	1	7	10,462	50·2
	Tumour - - - - -	-	5	4	-	-	-	-	507	101·4
	Gangrene - - - - -	-	1	1	-	1	-	-	118	118·0
	Carbuncle - - - - -	-	2	1	-	-	1	-	68	34·0

TABLE, No. 1.—Showing the Total Number of each Disease under Treatment, &c.—contd.

CLASS.	DISEASES.	In Hospital on 31st Dec. 1888.	Admitted in 1889.	Discharged.			Dead.	Remaining 31st Dec. 1889.	Total Number of Days under Treatment.	Mean Duration of Treatment of each Case.
				Cured.	Relieved.	Invalided.				
Wounds and Injuries -	Wounds - - - -	7	43	41	-	2	2	5	1,444	294
	Sprains - - - -	-	24	22	-	-	-	2	683	294
	Contusions - - -	4	47	42	-	6	-	3	1,862	365
	Dislocations - - -	-	2	-	-	-	-	2	65	22½
	Fractures - - - -	4	38	31	-	2	1	8	2,643	624
	Burns and Scalds -	1	6	5	-	1	-	1	108	151
	Concussion of Brain -	1	4	4	-	1	-	-	98	194
	Amputations - - -	-	3	-	1	1	-	1	161	60½
TOTAL - - -		145	1,373	1,266	6	115	12	119	60,510	394

TABLE, No. 2.
CAUSES of Death in Twelve Cases.

Cases sent into Hospital for	Nos.	Rating.	Ship or Establishment.	Cause of Death.
Suicidal Wound of Throat	1	Signalman -	Galatea - -	Phthisis.
Organic Disease of Heart	1	Hospital Nurse -	Naval Hospital -	{ Sudden death. Atheromatous condition of aorta and valves.
Otorrhœa - - -	1	Boy - - -	Seamew - -	{ Caries of petrous bones. Inflammation and suppuration of brain.
Ditto - - -	1	Marine - -	Hercules - -	
Compound Fracture of Fingers.	1	Workgirl - -	Dockyard - -	Tetanus.
Supposed Stricture of Urethra.	1	Bandaman - -	Royal Marine Corps.	Urethral fever. Bright's disease.
Carbuncle - - -	1	Engineer - -	Indus - -	Extensive sphacelus. Exhaustion.
Ulcer of Leg - - -	1	Boatman - -	Coastguard -	Rupture of aortic valves.
Abscess of Finger and Hand.	1	Pensioner - -	Dockyard - -	Amputation of finger. Pyæmia.
Chronic Abscesses - -	1	Ordinary Seaman	Lion - -	Exhaustion.
Stricture of Urethra -	1	Quartermaster -	Royal Adelaide -	1st. Sudden dilatation by Holt's instrument. 2nd. Urethral fever.
Lacerated Scalp Wounds -	1	Labourer - -	Dockyard - -	Erysipelas. Cerebral congestion.

SURGICAL REPORT

OF THE

ROYAL NAVAL HOSPITAL, PLYMOUTH,

FOR THE YEAR 1869,

By Deputy Inspector General **ROBERT BERNARD, M.D., B.A.,**

Honorary Surgeon to Her Majesty.

Appendix.

GENERAL STATEMENT.

Total number of patients in hospital on the 31st December 1868	- - - - -	203	
" " admitted in the year 1869	- - - - -	2,245	
" " discharged cured	- - - - -	1,886	2,448
" " " relieved	- - - - -	6	
" " " to the Royal Naval Lunatic Asylum, Yarmouth	- - - - -	8	
" " " invalided from the service	- - - - -	297	
" " " died in hospital	- - - - -	72	
			2,269
" " remaining in hospital on the 31st Dec. 1869	- - - - -	-	179
Daily average number of patients	- - - - -	-	247
Mean daily residence of each	- - - - -	-	36.8
Rate of invaliding per cent.	- - - - -	-	12.1
" deaths	- - - - -	-	2.9

ROYAL NAVAL HOSPITAL, PLYMOUTH.

THE site of this establishment was purchased from the Earl of Mount-Edgcumbe in 1757 for 2,240 *l*.

The hospital was opened for the reception of patients in 1760, and finally completed in 1762.

It occupies an elevated position, overlooking Stonehouse Creek, which forms its northern boundary, and receives its drainage, thence carried into the waters of Hamoaze by tidal action.

The entire area is 23½ acres, a very large portion of which is laid out in grass, and set apart for the recreation of convalescent patients.

The entrance from the town is in High Street, Stonehouse; immediately within the outer gate is the police station and watchhouse, from this an avenue leads to the houses of the resident officers, which form three sides of a square;

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Appendix.

square; facing them is the inner gate and main entrance to the hospital buildings.

The main buildings or "blocks," eleven in number (enclosing a spacious quadrangle, laid out in grass and flower parterres), are constructed of grey Devonshire limestone, with quoins and window dressings of cut Portland stone. Of these, two are situated on the outer angles of the western face of the quadrangle, the space between, forming the main entrance from the inner gate. Six are on the northern and southern faces, and the eastern is occupied by two ward buildings on its angles, between which, and facing the main entrance, is the eleventh or "chapel building," crowned by the clock turret or cupola.

Three sides of the quadrangle are lined by corridors eleven feet six inches wide, formed by pillars of mountain granite, nine feet apart, and roofed at a height of eleven feet six inches, the enclosed space being flagged, and forming a sheltered promenade in bad weather.

The ward buildings (ten) are each divided into six wards, two on the ground, two on the first, and two on the second floors.

In each there is a central hall door opening from the corridor, into a lobby common to and communicating with both wards; at one end of which are the waterclosets and lavatories, and from the other the stairs ascend, composed of granite steps and iron balustrades. The same arrangements as regards closets, lavatories, and lobbies exist on the other floors.

Each ward on the ground and first floors is of the following dimensions :—

Fifty-nine feet 8 inches \times 23 feet 10 inches \times 12 feet, giving a superficial area of 1,422, and a cubic space of 17,064 feet.

On the second floor the space is more limited, viz., 60 \times 24 \times 9, giving an area of 1,440, and cubic space of 13,680 feet.

The wards on each floor run parallel, separated by a dead wall, in which are two fireplaces and chimneys, one in the centre, the other near the door for kitchen purposes.

Each is lighted by five windows, four being situated on the side opposite the fireplace, and a fifth at the extreme end of the ward. In this last window is a small Louvre ventilator, and a second is fixed at the opposite end, midway between the door and ceiling.

In some few of the buildings there are additional means of ventilation, by Sheringham's valves.

The men's wards are each fitted for the reception of fourteen patients, but in the medical, as a rule, thirteen beds are only allowed to be occupied. Those appropriated for officers contain but four beds each, the remaining space being reserved for a common sitting-room.

There are sixteen wards for officers of various ranks, and forty-one for the reception of men. Seven are set apart for zymotic diseases, and one for lunatics. One ward space is fitted up as an excellent reading-room and library for the use of the patients, and part of another as a survey or board-room.

The buildings on the northern side are appropriated to the reception of surgical, and on the southern of medical cases. Each block is quite distinct, having no communication with the others, except from the external corridor. Between them, and of less elevation, on the northern and southern sides, are four pavilions. Of the two on the former, one is used as a store, the other fitted as an excellent operation-room, to which is attached a small ward. In those on the opposite side are the victualling-room, cook-room, steward's quarters, and a bath-room.

The eleventh or chapel building is occupied by the dispensary and laboratory on the north, and the medical library, museum, and officers' duty-rooms on the south side of the basement.

On the first floor is the chapel, containing 210 sittings. In this part of the building are also quarters for sick officers of superior rank. The second is occupied by the assistant dispensers, and on it are the sleeping apartments of junior medical officers temporarily attached to the hospital.

Immediately in the rear of this building, and in the recreation ground, are three pavilions fitted as smoking-rooms, two for the men, and one for the sick officers. A small mortuary chapel has also been recently erected at the eastern extremity of this ground.

The laundry buildings and disinfecting rooms are situated on the north side, near the creek. On this side are also reception and bath rooms for patients on admission,

admission, where they are examined and bathed before being sent to their respective wards; and in close proximity is a jetty, alongside which boats from the harbour can come at certain times of tide.

Water is supplied to the whole establishment from a reservoir situated at the northern extremity of the recreation ground; this is fed by the Devonport Water Company's leat, and the pipes for supplying the Royal William Victualling Yard pass through the hospital, branch pipes being made available in case of emergency or accident occurring to the hospital reservoir.

A convenient burial ground is connected with the hospital; this was licensed by the bishop of the diocese in 1826, but has not been consecrated.

Previous to 1823, interments from the hospital were made in Shag Park, Plymouth, now built over, and known as "The Crescent."

The total number of patients which the hospital is at present calculated to accommodate is 620, viz., seventy-three officers and 547 men; but a larger number could be received if necessary. In September 1780, during the war with France, 1,423 patients were in hospital at one time, while in 1856, the close of the Russian War, the greatest number was 405.

This number has been nearly approached on several occasions since.

A Table is appended giving the numbers treated in this hospital for twenty years, ending the year 1869, with the results.

Appendix.

TABLE showing the Number of Patients TREATED, INVALIDED, and DIED, for Twenty Years ending 1869.

YEAR.	Numbers of Patients under Treatment.			Invalided.						Died.					
				Medical.		Surgical.		Total.		Medical.		Surgical.		Total.	
	Medical.	Surgical.	Total.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1850 -	-	-	1,061	-	-	-	-	108	-	-	-	-	-	33	-
1851 -	-	-	767	-	-	-	-	94	-	-	-	-	-	30	-
1852 -	-	-	1,308	-	-	-	-	136	10.5	-	-	-	-	37	-
1853 -	-	-	1,385	-	-	-	-	156	-	-	-	-	-	41	-
1854 -	-	-	1,247	-	-	-	-	116	-	-	-	-	-	31	-
1855 -	-	1,124	1,121	2,245	143	-	52	-	195	-	43	-	16	-	59
1856 -	-	1,083	1,708	2,791	187	-	29	-	196	-	61	-	7	-	68
1857 -	-	897	1,126	2,023	86	11.7	30	2.7	116	6.8	53	5.7	4	0.76	57
1858 -	-	987	1,035	2,022	117	-	30	-	147	-	69	-	8	-	77
1859 -	-	1,162	1,312	2,474	106	-	30	-	136	-	78	-	13	-	91
1860 -	-	1,243	1,326	2,569	205	-	47	-	252	-	79	-	4	-	83
1861 -	-	1,181	1,467	2,648	213	-	57	-	270	-	69	-	7	-	76
1862 -	-	694	1,048	1,742	139	16.6	35	3.5	174	9.1	56	6.3	9	0.56	65
1863 -	-	809	1,057	1,866	109	-	35	-	144	-	39	-	8	-	47
1864 -	-	813	1,297	2,110	121	-	44	-	165	-	59	-	7	-	66
1865 -	-	787	1,260	2,047	121	-	25	-	146	-	59	-	4	-	63
1866 -	-	891	1,251	2,142	148	-	58	-	206	-	64	-	4	-	68
1867 -	-	864	1,151	2,015	181	18.2	56	5.1	237	10.4	66	7.1	9	0.56	73
1868 -	-	822	1,206	2,028	152	-	77	-	229	-	56	-	7	-	65
1869 -	-	930	1,518	2,448	182	-	115	-	297	-	60	-	12	-	72

Appendix.

Number of patients in the surgical wards of the hospital on the 31st December 1868		-	-	145
"	"	admitted in the year 1869	-	1,373
				1,518
"	"	discharged cured in 1869	-	1,266
"	"	" relieved "	-	6
"	"	" invalided "	-	115
"	"	" dead "	-	12
				1,399
"	"	remaining in hospital on the 31st Dec. 1869	-	119
Average daily number in hospital				165.7
" duration of treatment				39.8
Ratio per cent. of invaliding				6.5
" deaths				0.79
Number of naval patients treated				902
" marine "				616

One thousand five hundred and eighteen patients have been under treatment in the surgical wards during the year, a number in excess of previous years, with the exception of 1856, the close of the Crimean War.

The increase may, in a great measure, be attributed to the closure of the Infirmary attached to the Royal Marine Division at this port, in the month of April, and the transference of all cases of sickness to the wards of this establishment.

The ratio of invaliding, as well as that of deaths, shows an increase also. This will be explained in the remarks on particular forms of disease.

The cases stated to have been discharged relieved were those of pensioners admitted by Admiralty order, for temporary treatment.

Of those discharged cured, twenty-seven were transferred to the medical wards for the treatment of incidental complaints of a medical nature.

Erysipelas.—Fifteen cases have been admitted, and eleven men suffering from other complaints were seized with the disease in hospital. Of the former, eleven were consequent on slight injuries, and assumed the form of diffuse cellular inflammation of the extremities, while four were idiopathic affecting the face and scalp. Of those originating in hospital, three followed slight operations, while men suffering from other surgical diseases were in eight instances attacked. Two died; in one erysipelas of the face and head supervened on contused wounds of the scalp, in the other diffuse cellulitis followed the amputation of a finger.

The presence of this disease did not appear to depend on any cause within the hospital, nor did it show itself in a particular ward, neither did the cases from without come from any one ship or establishment; but it was observed, that when the disease was most prevalent, harsh dry easterly winds to a considerable extent prevailed.

All cases of erysipelas were carefully segregated in a well-ventilated ward, through which the fumes of carbolic acid were diffused. This latter precaution was more strictly carried out in the last quarter of the year.

Many of the cases were slight, requiring but little medical treatment. When the extremities were attacked good results were obtained by establishing a cordon above the diseased part, by a strong solution of iodine, while its tincture was brushed freely over the diseased skin. In those more severe, full support and stimulation were found necessary, with the internal administration of iron and chlorate of potash.

In the attendant delirium, the application of ice to the shaven crown acted beneficially;

beneficially ; and, when the cellular membrane was diseased, free and numerous incisions were indispensable.

Of the cases of death, the brain and its membranes became affected in the one and the lungs in the other. These cases will be found detailed at greater length under the heads of "Contusion" and "Abscess," diseases for which they were originally received.

The average daily duration of treatment was 33·7 days.

Syphilis, Primary.

Cases remaining in hospital on the 31st December 1868	31	
" admitted during the year 1869 - - -	261	
Cases discharged cured during the year 1869 - -	265	292
" " invalided " - -	5	
		270
Remaining in hospital on the 31st December 1862	-	22
Number of naval patients treated - - - -	-	137
" marine " - - - -	-	155
Mean duration of treatment - - - -	-	days 41·6

Of the cases of this disease remaining from the previous year, eleven appeared to have assumed the indurated, and twenty the non-specific form of disease. Of those admitted during the year, eighty-nine were of the former type, of which sixty-one were contracted within the Plymouth district, while 172 were soft sores ; 133 of which were received in the neighbourhood. Thus it will be observed that the sores considered specific were thirty-four per cent. of the whole. With a few exceptions the ulcerations had existed prior to admission, when the inguinal and post-cervical glands were generally found to be indurated.

Many of the sores were accompanied and followed by suppurating buboes ; in such cases the chancres were generally of the soft form.

Fully one-third of the whole were followed by constitutional symptoms.

In twenty-three instances roseoloid eruption followed what were considered soft sores, two of which had assumed the phagedænic form. These twenty-three chancres were all situated on the glans penis, appeared on admission to be mere excoriations, were stated to have been of very recent existence, and only discovered on medical examination immediately prior to admission. Dating their breaking-out from three days prior to detection, it was found in an average of twenty-one cases (excluding the phagedænic) that the eruption showed itself on the thirty-second day.

The following was the mode of treatment :—

In the case of soft sores, local applications of the least irritating character were alone used.

The same was observed when the indurated ulcer on admission was not of very recent origin ; in such cases an expectant treatment was adopted.

In recent cases, however, small doses of the proto-iodide of mercury were given two or three times a day combined with opium, so as to produce a very slight effect on the gums, and when this was obtained, at longer intervals, to keep up the influence for about four weeks ; but in several of such cases constitutional symptoms supervened when the system appeared to be mercurialised.

Suppurating buboes proved very intractable under ordinary treatment ; during the latter part of the year, however, they were treated with more satisfactory results, on the antiseptic plan, by carbolic acid, as recommended by Professor Lister. In such cases when diseased glands were exuberant and protrusive, their destruction by the insertion of arrows composed of corrosive sublimate and bread, has been long found in this hospital to be most complete and innocuous. In granular testes they have been found also to be most useful.

Five cases of primary syphilis appear as invalided, but this step was resorted to after their cure, the men being found to labour under the following diseases :

1. Hernia. 2. Varix. 3. Organic disease of heart. 4 and 5. Scrofula.

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Syphilis,

Appendix.

Appendix.

Syphilis, Secondary.

Patients in hospital on the 31st December 1868	-	20	
„ admitted in 1869 - - - -	-	148	
„ discharged cured in 1869 - - - -	-	130	168
„ „ invalided in 1869 - - - -	-	21	
„ „ dead in 1869 - - - -	-	1	
			152
„ in hospital on the 31st December 1869	-	-	16
Mean duration of treatment in days	- - -	43	
Number of naval patients treated	- - -	94	
„ marine „ „ - - -	- - -	74	

In the cases of constitutional syphilis treated, the symptoms were for the most part mild and amenable to treatment. The roscoloid eruption was most generally met with (probable period of incubation thirty-two days), and next in frequency the papular. Mucous tubercles attacking the mouth and anal fissure were not uncommon. In six cases iritis appeared in patients already in the wards, while two were received for that disease. Two cases of rupia in cachectic subjects were admitted. These men had been invalided from Jamaica and Valparaiso, where the disease had been contracted.

The treatment was uniform and successful. In the ordinary eruptions, mercurial vapour baths were given every alternate evening, a drachm of calomel being on each occasion used in the apparatus. With this generally was administered a drachm of the liquor hydrargyri perchloridi in decoction of bark or sarsaparilla during the twenty-four hours. This treatment was kept up for four or five weeks. In iritis the same was adopted; the iris being kept in a state of dilatation by means of atropine and belladonna fomentations.

In tertiary syphilis, mercury was but seldom given, and only in the form of vapour baths. Iodide of potassium in full doses and the mineral acids being in such cases administered with good effect. The system was at the same time well supported. The iodide appeared also to answer best in the scaly eruption.

Twenty-one cases were invalided, as follows :—

Two, in men who had suffered from tertiary syphilis.

Three, where the irides were affected, and imperfect vision resulted.

One, a case of phthisis.

One, deafness unconnected with syphilis.

Two, caries of the bones of the cranium.

One case complicated with ulceration of rectum.

One case complicated with organic disease of heart.

Ten, in scrofulous subjects, constitutions generally cachectic.

The above were for the most part convalescent on leaving the hospital, but considered to be unfit for further active service.

In a case which proved fatal the patient gradually sank in consequence of the continued discharge from abscess situated on the breast and thigh.

Gonorrhœa.

It will be more convenient to take this form of venereal disease in connection with syphilis, although not strictly in tabular order.

The

The numbers are,—

Cases remaining on the 31st December 1868	-	-	11	
" admitted in 1869	-	-	241	
" discharged cured	-	-	235	252
" " invalided	-	-	2	
				237
" remaining in hospital on the 31st December 1869	-	-	15	

Naval patients treated for the disease - - - 71

Marine - - - 181

Mean duration "treatment," - - - days 33·4

An unusually large proportion of gonorrhœal cases were treated this year, and more particularly during the last five months. The Royal Marine Infirmary was closed on the 30th of April, and all cases of disease in the men of the marine division were after that date transferred to this establishment for treatment. The Marines were medically inspected monthly, and also previous to embarkation, and if found to suffer from the venereal disease in its slightest form were immediately sent into hospital. This rule necessarily swelled the list, and a glance at the respective numbers will show how very much the increase was due to this cause.

It was found necessary to retain convalescents from this disease in hospital until all traces had disappeared, as recurrences had not unfrequently taken place, consequent on excess indulged in immediately after the men's discharge from hospital. This will explain the prolonged duration of treatment.

Cases of simple gonorrhœa were only sent in from ships connected with the training of Naval cadets and boys.

The plan of treatment was entirely local, by injections and medicated wax bougies. The usual injection, and that found most useful, was a combination of sulphas ferri, cupri, zinci, and aluminis, in the proportion of $\frac{1}{4}$ a grain of each to the ounce of water.

In many in the chronic form the disease was very obstinate, and the cure protracted, but the general health rarely suffered, and secondary disease, such as rheumatism, stricture, &c., seldom followed. Orchitis was, however, not an unfrequent sequence.

Two men recovered from gonorrhœa were invalided, the one for hernia, the other for organic disease of the heart.

In reference to the subject of venereal disease generally, as observed in this hospital for several years, a Table is appended, which shows the relative admissions of each form, and the progressive decrease which has taken place since the Contagious Diseases Act came into operation at Plymouth.

An increase in 1869 of the primary forms of disease is observable, but the cause has been explained.

YEAR.	Total Admissions to Hospital.	Primary Syphilis.		Secondary Syphilis.		Primary and Secondary Syphilis.		Gonorrhœa.	
		Nos.	Per Cent.	Nos.	Per Cent.	Nos.	Per Cent.	Nos.	Per Cent.
1860 - - -	2,316	-	-	-	-	632	27·28	131	5·65
1861 - - -	2,373	-	-	-	-	834	35·14	69	2·90
1862 - - -	1,477	-	-	-	-	439	29·72	31	2·09
1863 - - -	1,607	-	-	-	-	570	31·73	61	3·79
1864* - - -	1,805	-	-	-	-	650	36·01	84	4·65
1865 - - -	1,797	321	17·86	270	15·02	591	32·88	84	4·67
1866 - - -	1,962	249	12·69	233	11·87	482	24·56	76	3·87
1867 - - -	1,783	185	10·37	173	9·70	358	20·07	53	2·97
1868 - - -	1,804	156	8·64	156	8·64	312	17·29	107	5·93
1869† - - -	2,245	260	11·58	138	6·14	398	17·73	241	10·73

* Contagious Diseases Act came into operation.

† Royal Marine Infirmary closed.

Appendix.

Scrofula.—Fourteen cases were treated, of which seven were invalided, and one, a pensioner, discharged relieved. They were for the most part admitted for the treatment of abscesses in connection with diseased glands, in boys of the training ships, and require no particular comment.

Neuralgia.—The first was the case of a serjeant of Marines, who had received a bullet wound at the Battle of the Alma in 1854, which had entered a little above the spine of the left scapula, and escaped about one and a-half inch above the sternal end of the clavicle, passing apparently through the Trapezius muscle. The cicatrix of "entrance" was complained of as having become so sensitive during the previous six months as to prevent his wearing his knapsack. There was also shooting pain down the arm.

It was proposed to him to allow the cicatrix to be cut out, which he refused to submit to, but it was effectually destroyed by the application of caustic potash. He was discharged free from pain on the cicatrization of the remaining ulcer.

The second, a pensioner, who had suffered, he stated, from disease of the hip-joint of the same side years before, and of which no trace remained, was treated for sciatica, which was relieved by ordinary treatment.

Diseases of the Eye.—Under this head were included cases of conjunctivitis, cataract, iritis, and symblepharon. Of conjunctivitis the cases were generally mild in character, yielding to treatment, which was, however, in several instances prolonged, the subjects being of a scrofulous habit. There was one of some interest, in which extensive and exuberant granulations formed on the inner lids of the left eye in a strumous boy. These were repeatedly removed by the knife, but returned on each occasion with rapidity and excess of growth. The occasional application of sulphas cupri was then substituted, combined with the internal administration of cod-liver oil and iodide of iron, and with the best results. Some opacity of the cornea, however, remained, which necessitated his being invalided from the service.

One case of cataract was invalided. The patient was a boatswain and suffered from double soft cataract with total blindness. That of the right eye was operated on "per solution," the capsule of the lens being divided by a straight needle introduced through the cornea, and the lens twice broken up. The result was successful, absorption rapidly took place, and the patient went out of hospital with sight as far as possible restored. He was recommended to return in two months, when the other eye would be operated on.

Two other cases were invalided, opacity of the cornea being the sequence in each, of an attack of conjunctivitis.

Two men were admitted for syphilitic iritis, and discharged cured.

One case of symblepharon was treated successfully, adhesions of long standing between the lower lid and conjunctiva of the eye having been removed by the knife. This was the result of the accidental introduction of lime into the eye.

Diseases of the Ear.—Of these, there were ten in number, four cases were invalided, and one died. Those invalided were as follows:—

- One rupture of the membrana tympani; result of a blow.
- " permanent deafness from repeated attacks of otitis.
- " ulceration of tympanum in a strumous subject.
- " otorrhoea connected with diseased meatus.

The patient whose case proved fatal, had suffered since childhood from otorrhoea; extensive caries of the petrous portion of the temporal bone ensued.

The other cases of ear disease were unimportant, and for the most part were caused by the irritating effect of indurated wax secretion.

Diseases of the Nose.—One was a case of fistula lachrymalis from obstructed nasal duct. A style was after some time introduced through the fistulous opening, and a perfect cure ultimately obtained.

A second was syphilitic ozoena affecting the mucous membrane, with resulting caries of the turbinated bones.

The third was a case of gelatinous polypus, attached to the septum narium, which was twisted off and extracted by forceps.

Organic

Organic Disease of Heart.—The case was one of hypertrophy and dilatation of both ventricles, with valvular disease, terminating in sudden death.

Aneurism.—Two cases under this heading were admitted; one of popliteal, the other of inguinal; the former yielded to pressure of the femoral vessel; the latter was cured by ligature of the external iliac artery.

Varix.—Of this disease, affecting the lower extremities, ten cases were admitted, while eleven in hospital for the treatment of other complaints were found to suffer from the same. Fifteen were operated on with apparent success; six did not admit of surgical interference.

Two modes of procedure were adopted, and these often in combination. One, that of passing a pin beneath the vein and effecting compression of the vessel between it and a roll of cork or bougie by means of the ordinary figure-of-8 suture. The pin was left in for a time varying from three to ten days.

The other, and that most frequently used, was the application of an escharotic to the more prominent knotty points. This was the "Vienna paste," composed of equal parts of caustic-potash and lime, moistened with spirits of wine. Squares of leather spread with soap plaster were placed over the varicose nodules, small holes of less than a quarter of an inch in diameter being punched in each, into which the paste was inserted, and allowed to remain for about twenty minutes. As many as fourteen applications were made at one time to the same limb.

Acupressure was used when the venous trunk was found to be tolerably free from tortuosity, and the internal saphena behind the tibia was the one generally thus dealt with; but, with or without this, the escharotic was invariably used.

No bad effect from either was found to result. In one case, where a large mass of varix filled the popliteal space, an abscess followed, but this rather favoured the completion of the cure.

It is but right to state that the pins used were previously dipped in an oleaginous solution of carbolic acid, and any tendency to inflammation appeared to be checked by the local use of this disinfectant.

The separation of the sloughs and subsequent cicatrization were tedious, and stiffness of the limb remained for some time after. The final results, however, were most satisfactory.

Sympathetic Bubo.—These were twenty-four in number, and were apparently unconnected with venereal disease, and dependent on impaired general health. They have all done well, requiring, however, supporting and protracted treatment.

Gangrene.—There was one admission under this head, a ship's cook, of negro origin, æt. 51, who, when visited on shore by a medical officer of his ship, was found to suffer from gangrene of the foot, the result of destruction of the tibial arteries from extensive ulceration, which opened into the ankle-joint. This latter was of long standing, but, strange to say, the man had been doing duty up to a short period before admission, the surgeon being kept in ignorance of the advanced state of disease.

The limb was removed by amputation, and the case, which did well, is detailed under the head of Operations.

Hæmorrhoidal Tumours.—There were six cases situated outside the sphincter, and of large size. All were treated successfully by excision, with the aid of Smith's clamp, and the actual cautery.

Fistula in Ano.—Nine patients were under treatment for this disease, of which seven were discharged cured; the operation of dividing the sphincter having in each case been resorted to.

The remote cause of one was the swallowing a fish-bone. The patient, an officer, had for a long time suffered from irritation of the rectum, and the presence of the bone was at length ascertained by the surgeon of the ship, who cut it out. A fistula communicating with the gut was the consequence, which did well after the ordinary operation.

In another case the external opening was more than two inches from the anus. That into the rectum was very high up, and the thickness of structure between the fistulous canal and the gut very considerable. Every means were resorted to in vain, to effect a cure without operation, and it was found neces-

Appendix.

sary to perform it with an unusually long knife and director, by the aid of a speculum.

Prolapsus Ani.—One in number. This was the sequence to an operation for fistula, in which the sphincter had been freely divided. The fistulous passage entirely healed up, but a want of voluntary power over the muscle, and occasional prolapse of the gut, was the consequence. It was proposed to operate for the relief of the latter, by removing folds of skin from round the anus, as recommended by Dupuytren, but the patient refused to submit, and was discharged.

Nephritis.—Under this heading is a case of death from urethral fever, caused by the irritation of the attempted passage of a catheter in a man suffering from Bright's disease.

Enuresis.—There were four patients suffering from incontinence of urine treated, of whom two were invalided; one for irritable and enlarged prostate, in an elderly man. By palliative measures the more urgent symptoms were relieved. The second was a boy of anæmic delicate habit, who had been in the habit of wetting his bed from childhood. Chalybeates and other remedial measures were tried in his case, and he was finally discharged better, but by no means cured of the disease.

The others were cases of irritable bladder consequent on acute gonorrhœa; as were also two cases entered under the head of Cystitis. All proved very amenable to treatment.

Hydrocele.—Of these, twelve in number, ten were treated successfully by the ordinary operation of paracentesis, the sac being in each case injected with a drachm of the tincture of iodine. In two of small size, a seton of a single worsted thread was introduced with good result.

Fistula in Perineo.—One case was admitted. It was of long standing, the man having had abscesses in the perineum opened nine months previously in Malta Hospital (he never had stricture), the fistulous openings, which were situated behind the scrotum, being the consequence. These were found to communicate with the urethra.

A variety of local treatment was tried ineffectually for a long time. The man was eventually directed to pass water only through an instrument, which was at first tied in the urethra, and afterwards introduced when the bladder required emptying (he having himself become very expert in its introduction). Under this, carefully carried out, the case did eventually very well.

Stricture of the Urethra.—No less than fifty-four cases of this disease were under treatment; of which, forty-two were discharged cured, one died, and seven were invalided. The mean duration of treatment was thirty-seven days.

With two exceptions they were treated by dilatation, more or less gradual.

In spasmodic strictures, and those of more recent origin, rapid dilatation by Wakley's instruments and the metallic conical sounds was effected with advantage, while in others, more gradual progress was made by gum-elastic bougies. Two, were split by Holt's instruments: in one the case did very well; in the second, unhappily, death resulted. The operation was performed without any complication whatever; but rigors and persistent vomiting set in, with much prostration, appearing to indicate the reception of a great shock, and he died on the sixteenth day.

No examination of the body was allowed by the friends, who removed it an hour after demise.

In one case the patient came in for retention of urine, the result of traumatic stricture of long standing, and the operation of paracentesis through the rectum was performed with good results, every attempt, even under chloroform, to relieve him by the introduction of an instrument having failed.

Varicocele.—Three in number. In one case the spermatic vein was obliterated by compression between an acupuncture pin and a portion of bougie, as in the case of varix of the leg, and with success. One was invalided; the third was very slight, and was discharged well, without surgical interference.

Orchitis.—Twenty cases were sent into hospital suffering from this disease, while fully as many resulted from gonorrhœa in the wards. The former were generally the effects of direct violence.

In all, the treatment was much the same; the recumbent posture, support of the

the testes on a bandage passed round the thighs, and hot moist applications. In three very acute cases, where the swelling and pain were intense, a small knife was introduced through the tunica albuginea, so as to puncture that membrane to a very small extent, and allow the escape of a sanguineous serum, which was attended with great and immediate relief. As the disease became less acute, painting with tincture of iodine and strapping with adhesive plaster hastened the completion of the cure. In one case, which came in with large fungoid excrescences from the gland, a rapid cure was effected by introducing into the substance of the fungus, arrows composed of corrosive sublimate, made up into proper consistence with a little bread. This was alluded to in the treatment of buboes.

Calculus.—Two cases of this disease have been in hospital. In one, lithotrixy was performed successfully. The stone was large, of phosphatic composition, and the man's age 36. Eight sittings were required; the instrument used being Weiss's improved by Thompson. The operations were performed at long intervals, as there was repeated impaction of broken fragments difficult of removal, and giving rise to considerable constitutional irritation.

For the extraction of these, D'Etoilles' urethral forceps was found useful, as also Thompson's. The man was discharged quite well.

The second was the case of Mr. W. S., boatswain, Her Majesty's ship *Indus*, æt. 34, sent into hospital on the 12th of May, in whose bladder a small calculus was detected by the sound, and supposed to have passed subsequently when the patient was at stool.

Diseases of Bones.—Of these, six were cases of necrosis, three of caries, and one of exostosis.

Necrosis.—Three cases of this disease occurred. In one, part of the femur was affected; the tibia in a second; and in the third the lower maxilla, which had many of the characters of "phosphorous necrosis."

Caries.—Of this disease there were three cases; one affecting the fifth metatarsal bone; a second, the second phalanx of ring finger; the third, the petrous portion of the temporal bone was diseased, terminating in the death of the patient.

Exostosis.—An instance of this appeared as a tumour above the eyebrow, including the superciliary ridge of the frontal bone, and encroaching downwards on the orbital plate. It was of ivory hardness, with a broad base, in close connection with the frontal sinuses and the orbit; the result of a fall from the forecabin of his ship four years before.

An operation was considered unadvisable in this case.

Diseases of Joints.—Nineteen cases have been under treatment; of these, seventeen were synovitis, one case of loose cartilage in the knee-joint, and one of ankylosis. Seven were invalided.

One was the case of an able seaman, where stiffness of hip-joint resulted from a deep stab in the groin extending backwards. The stiffness appeared to depend in some degree on atonic state of the muscles.

A second was sent into hospital for subacute synovitis affecting the elbow-joint; the result of a fall. Disease advanced, affecting the cartilages and bones, and excision of the joint was ultimately performed successfully. (*See Operations*).

A third was the case of an officer suffering from symptoms of synovitis, the result of the occasional partial dislocation of the internal semilunar cartilage, attributed to a fall down the hatchway of his ship. When at rest, he at first suffered no pain, which came on unexpectedly after some movement of the limb, and was only relieved by manipulation of the joint.

The fourth case originated in subacute synovitis of the knee. Thickening of the tissues remained, for which, and a scrofulous constitution, he was invalided, as were also two other cases for a similar taint.

Several of these cases would in course of time become the subjects of surgical operations, and on discharge which they claimed after being invalided, they were advised to return when the disease advanced.

There was one case of loose cartilage of the knee-joint, which was proposed to be excised, but the man refused to submit to an operation, and he was invalided from the service.

Of the cases of synovitis, the hip-joint was the subject of disease in two, the knee-joint in thirteen, and the elbow in two.

Appendix.

Diseases of Bursa.—Two in number, were unimportant, affecting the bursa covering the patella.

Phlegmon and Abscess.—Of these sixty-six were under treatment, of which very many were trivial. Four were invalided and one died.

Abscesses were treated during the greater part of the year by the antiseptic mode with carbolic acid as advised by Professor Lister, and with marked success, those especially in the form of suppurating buboes, which had proved most difficult of cure. Many failures took place, which, however, could be traced in all to a want of care in carrying out the details of treatment. To ensure success, it was found necessary, first, to prevent the introduction of any air into the wound; second, to renew the dressings impregnated with the acid, before their antiseptic powers were exhausted; these were readily effected by introducing the knife beneath a curtain of lint soaked in a strong solution of carbolic acid, and changing the dressings under the protection of the same solution, kept playing during the operation from an ordinary syringe. Before opening the abscess a strong solution was first applied to the surface and surrounding integument, to destroy any lurking germs. Under ordinary circumstances cures were effected in this way in from eight to twelve days, and in all cases an almost complete immunity from constitutional disturbance and hectic fever was obtained.

The case of death was one in which diffuse cellular inflammation of the arm occurred.

Ulcer.

Cases remaining on the 31st December 1868	-	-	-	27	
„ admitted during the year 1869	-	-	-	181	
„ discharged cured	-	-	-	166	208
„ „ relieved	-	-	-	2	
„ „ invalided	-	-	-	32	
„ „ dead	-	-	-	1	
					201
„ remaining on the 31st December 1869	-	-	-	-	7

Of this disease 181 cases were received. The type was unusually mild, and the hospital singularly free from sloughing or phagedœnic sores.

71 cases were received in the 1st quarter of year. 12 invalided.

67	„	2nd	19	„
26	„	3rd	1	„
17	„	4th	0	„

By far the greatest number were received from the boys' training ships, and, of these, from the *Impregnable*, twenty-two belonging to this ship being invalided for ulcer in hospital, while a considerable number were also brought forward, with the same result by the staff surgeon on board.

Various reasons were from time to time assigned for this extraordinary prevalence among boys otherwise in rude health. The ulcers (chiefly of the leg) readily healed up under careful watching in hospital; the boys were only discharged to their ships when the cicatrices were perfectly sound, and a well-padded guard was carefully adjusted in each case for protection; but the recurrences were most frequent, and some of these lads who were invalided, had been six times and upwards under treatment in hospital within the year. Suspicion was aroused, and the nurses were directed to keep a careful watch. In July, a boy of the *Impregnable* was discovered at night to have removed his leg from a wooden casing in which it had been, as was supposed, securely locked, and detected in the very act of substituting a piece of rag smeared with unguentum cantharidis, for the dressing which had been applied. This boy confessed that he had done this for the purpose of being invalided, and that he had been three times discharged from hospital cured, and as often returned with ulceration re-produced in this way, and that it was a most common practice with the boys of the training ships. He said that the irritating substances used were stolen from the sick bays, and generally consisted of blistering ointment, alum, and bluestone.

This was brought under the notice of the commander in chief, and steps were taken which effectually checked the practice, as is shown by the great diminution of ulcer cases in the two last quarters of the year.

One

One man admitted for this disease died of cardiac valvular disease.

Cutaneous Diseases.—Seventy-six in number, of which fifty-eight were scabies. A variety of topical applications were tried, among others, carbolic acid, dissolved in oil and glycerine, and in the form of soap. These cured the disease, but not so effectually or expeditiously as sulphur ointment.

The other diseases included eczema, herpes, prurigo, syccosis, lepra, ichthyosis, and psoriasis. In some the cure was very protracted, but all did well.

Tumours.—These were five in number.

One, was an epulis growing from the lower jaw, and intimately connected with the alveoli of the incisor teeth; it was of the size of a raspberry, and, with the bone to which it was attached, was removed by the knife and gouge. The wound healed up slowly, but the disease showed no disposition to return up to the time of his discharge from hospital.

A second, was a large circumscribed tumour in the popliteal space, the size of a hen's egg, elastic to the feel, and destitute of pulsation, stated to have been caused by a strain. It appeared to be unconnected with the bloodvessels, and gradually disappeared under the application of iodine and compression.

Two others were encysted tumours, situated, in one case, on the upper eyelid, and, in the other, at the inner canthus of the eye. They were removed with the scalpel, and the cases did well.

The fifth was an enchondromatous mass situated on the second finger of the right hand, of six years' growth, but it had increased rapidly of late, and prevented a satisfactory performance of his duty. This was dissected out, and was found to extend beneath the extensor tendon, in close connection with the joint. Anchylosis was the result, and the man was invalided after a protracted stay in hospital.

Anthrax.—Of this affection there were two cases; one on the back of the neck; treated by injections of carbolic acid beneath the skin and compression, it did well; the second, in the same situation, terminated fatally.

Wounds.—Of the fifty treated, four were invalided and two died. Eighteen were lacerated wounds of the scalp, one of which terminated fatally; one incised, of throat, also with a fatal termination; one lacerated, of perinæum; four of eye-ball, and twenty-five slight and various.

The cases of death were,—

1st. Incised wound of throat, in an attempt to commit suicide. The thyro-hyoid membrane was divided. The patient died of phthisis four months afterwards.

2nd. Lacerated wound of scalp.—Erysipelatous inflammation of scalp supervened, with cerebral symptoms and death on the 13th day.

A case of division of tendo Achillis occurred.

Wounds of Eye.—Of these there were four; two of the cornea, and two of the sclerotic, sustained by artificers in the dockyard, from flying chips of iron or steel. In one case the man came in with a superficial wound of the cornea, the anterior chamber being filled with effused blood, and vision completely obscured. The blood, however, was rapidly absorbed, and the case did well. In a second, the symptoms were much the same; the cornea, however, sloughed, and vision was permanently destroyed. A third, was a penetrating wound of sclerotic, through which the edge of the iris protruded. This case did well. Some irregularity of pupil remained, and a slight hernia of iris was visible, covered by conjunctiva, but the vision was fair, and improving daily on his discharge. A fourth was a wound of sclerotic of long standing; the humours of the eye had escaped, and there was hernia of the iris.

Sprains were twenty-four and contusions fifty-one in number. Six of the latter were invalided. These presented nothing of importance.

Dislocations.—These were two in number.

One was partial, of the sixth rib anteriorly from the sternum. The case did very well.

The second was a compound dislocation of the distal joint of the thumb, where it was necessary to remove the head of the first phalanx, converting the injury into a compound fracture. Cicatrisation was satisfactorily completed in fifteen days,

TABLE OF FRACTURES.

FRACTURES OF											REMARKS.
Under Treatment.		Discharged Cured.		Invalided.		Died.		Remaining 31 December 1869.			
Simple.	Compound.	Simple.	Compound.	Simple.	Compound.	Simple.	Compound.	Simple.	Compound.		
Lower jaw	1	-	-	-	-	-	-	-	-	Close to the angle; treated by a gutta percha mould.	
Clavicle	2	-	-	-	-	-	-	-	-	1st. Oblique, in outer third, from direct violence; 2nd. Transverse, same situation, from fall on shoulder; both treated with Ellis's apparatus.	
Ribs	2	-	-	-	-	-	-	1	-	1st. Sixth rib, anterior to angle; 2nd. Fifth rib, behind angle.	
Humerus	2	-	-	-	-	-	-	1	-	1st. Transverse, immediately below surgical neck; 2nd. Immediately above elbow.	
Olecranon	2	-	-	-	-	-	-	-	-	Both transverse, caused by falls on the bone; discharged with bones in close approximation and good ligamentous union.	
Radius	4	-	-	-	-	-	-	-	-	Three at the carpal extremity (Collis's); treated with pistol splint; the fourth in the middle third; in each caused by falls on hand.	
Radius and ulna	2	-	-	-	-	-	-	-	-	Lower third of forearm, caused by direct violence.	
Metacarpus and phalanges	-	4	-	-	1	-	1	-	-	1st. Fingers crushed by machinery in a girl sixteen years of age; three were amputated; tetanus supervened on eighth, and death on tenth day: 2nd. Metacarpus and fingers lacerated and partially blown away by explosion of gun; partial amputation of hand: 3rd and 4th. Compound fractures of fingers, requiring in one case amputation of middle (ring), and little fingers; in second, of ring finger.	
Femur	4	1	2	1	-	-	-	2	-	One through great trochanter; three middle of femur, and one compound at upper part of lower third, with a second fracture two inches lower; two still in hospital, nearly well; degrees of shortening respectively in inches $\frac{1}{4}$ th, $\frac{3}{8}$ th, 1, $\frac{1}{4}$ th, $\frac{3}{8}$ th.	
Fibula	3	-	3	-	-	-	-	-	-	Two at junction of middle and lower third; a third complicated with partial dislocation of inner malleolus (Pott's Fracture).	
Tibia and fibula	11	3	6	1	1	-	-	2	2	Simple.—Six transverse, three oblique, and two comminuted, all situated below the middle of leg. Compound.—Two comminuted of tibia, simple of fibula; one oblique of tibia, simple of fibula; one simple invalided, being a re-fracture.	
Metatarsal bone	1	-	-	-	-	-	-	-	-	Of great toe, caused by direct violence.	

Fractures have been numerous. Those (simple) of the leg and arm were treated in the same way, a roller being passed firmly and evenly from the toes or fingers upwards to above the fracture. This prevented swelling in the first instance, and reduced it if already existing. The ordinary wooden splints were then applied, and in the case of the lower extremity, the limb was laid in Salter's sling. On the fourth or fifth day, the bandage was re-adjusted, and pasteboard splints, moistened so as to allow of their perfect adaptation to the limb, substituted. Folds of cotton wadding, soaked in a solution of gum and chalk, were then added, and the whole covered over with a bandage painted over with the same solution. When this casing was thoroughly dry, the patient was allowed to get up, and, in the case of the leg, to go about on crutches. In one instance, a boy, who had sustained fracture of both bones of the leg, twice in the same situation, was invalided.

In the cases of fractured femur, Desault's single splint was used, with a transverse iron bar attached to the lateral foot-piece, well padded, and of sufficient length to extend from the mamma to three inches below the heel. A stirrup was made by a long strip of very adhesive plaster passed across the foot, and upwards on each side of the leg to the knee. This was connected to the iron rod by tape, and extension made in the ordinary way with a perineal band, a roller being first passed from the toes to the groin, and prevented slipping, by being brushed over with a light coating of the solution already mentioned, consisting of equal parts of powdered gum and chalk, suspended in a sufficient quantity of water, to make it of proper consistence. This appeared to answer better than plaster of Paris or starch.

Compound Fractures.—That of the femur, and one of the leg were treated strictly on the antiseptic principle by carbolic acid, and gave very favourable results. The respective wounds healed rapidly, and there was an entire absence of irritative fever.

Amputation of Fingers.—*Tetanus.*—This occurred in a nervous girl, æt. sixteen, a machinist. The right hand was crushed between rollers. The index finger was amputated. The patient progressed satisfactorily up to the seventh day, when symptoms of tetanus supervened. On the tenth day she expired.

Burns and Scalds.—These were very slight, their mean duration of treatment being but fifteen days. One was invalided. The case was that of a man who was invalided at Ascension in December 1868, for loss of vision of right eye, caused by the explosion of gunpowder, when assisting in blasting a rock; the face, both eyes, chest, and arm, being all more or less injured at the time. On admission these last were well; but the vision of the right eye was gone, and that of the left imperfect from partial opacity of cornea.

Concussio Cerebri.—Five cases were treated.

Three were slight, the symptoms well marked in the first instance, and gradually subsiding, without special treatment; the result of falls on board ship on the occiput. The other two were more severe, and also the result of falls on the head.

Amputations.—Three cases were admitted, in which the operations had been performed on board their ships. Two came from Her Majesty's ship "Defence," both amputations of leg; one immediately below the knee, the other in the lower third of the limb. In the former, the stump, an excellent one, was not quite healed on admission, and the general health not very good. This case quickly recovered in hospital. The second was that of an unhealthy boy, who suffered from renal disease, and passed from time to time a large number of phosphatic calculi per urethra. The stump was conical, and the ends of the bones and the skin were diseased. He improved very much in hospital, where he remained to the end of the year, and it was intended in a short time to perform secondary amputation below the knee.

In the third the distal phalanx of the left index-finger was removed for injury, and the surgical wound was not quite healed on admission.

TABLE, No. 3.
SURGICAL OPERATIONS PERFORMED.

Nature of Operation.	Number.	Results.				REMARKS.
		Successful.	Relieved.	Unsuccessful.	Died.	
Eye and Appendages :						
Lachrymal fistula - -	1	1	-	-	-	Cure effected by the introduction of a style through the fistula into the nose.
Symblepharon - - -	1	1	-	-	-	A fold of conjunctiva removed, and parts prevented adhering by drawing down lower lid.
Solution of crystalline lens -	1	1	-	-	-	Soft double cataract. One eye operated on. Needle introduced twice.
Circulatory System :						
Ligature of internal iliac artery	1	1	-	-	-	For inguinal aneurism.
Obliteration of varicose veins	15	15	-	-	-	Disease affecting the veins of leg. Treated by acupressure and Vienna paste.
Removal of sequestra from upper jaw.	1	1	-	-	-	Consequent on a blow. A considerable portion of alveolus removed by gouge and forceps.
Removal of sequestra from lower jaw.	1	-	1	-	-	Resembling "phosphorous necrosis." The greater portion of the jaw removed piecemeal.
Removal of sequestra from sternum	1	1	-	-	-	A large portion of necrosed bone taken from first bone of sternum. Case originally syphilitic.
Removal of sequestra from femur	1	-	1	-	-	Necrosis of long standing. Sequestrum presented itself at fistulous opening, and readily removed.
Removal of sequestra from tibia -	2	2	-	-	-	Extensive necrosis. Sequestra removed by cutting forceps, cloaca having been enlarged.
Amputation of carpus - - -	1	1	-	-	-	Hand partially blown away by explosion of a ship's gun.
„ fingers - - -	7	5	-	-	2	Death in one case from tetanus ; in another from erysipelas and pyæmia.
„ leg - - -	1	1	-	-	-	Gangrene of foot. Destruction of tibial arteries by phagedænic ulceration.
Excision of elbow - - -	1	1	-	-	-	Disease the result of an injury.

TABLE, No. 3.—Surgical Operations Performed—*continued.*

Nature of Operation.	Number.	Results.				REMARKS.
		Successful.	Relieved.	Unsuccessful.	Died.	
Removal of Tumours:						
Epulis - - - -	1	1	-	-	-	Non-malignant. Situated on upper jaw. Removed with alveolar processes.
Enchondroma - - -	1	-	1	-	-	A tumour of considerable size on finger. Removed completely. Ankylosis of distal joint.
Encysted of eyelid - -	2	2	-	-	-	Removed by the knife; the first from upper eyelid, the second from inner canthus.
Of scalp - - - -	1	1	-	-	-	A fatty tumour removed from beneath the scalp of occiput.
Polypus of nose - - -	1	1	-	-	-	Gelatinous. Removed by forceps from septum of nose.
Hæmorrhoids - - -	6	6	-	-	-	External; removed by the knife, with Smith's clamp and cauterising iron.
Removal of Calculus:						
By lithotrixy - - -	1	1	-	-	-	Phosphatic calculus; eight sittings. Total weight of detritus removed, 210 grains.
From urethra - - -	2	2	-	-	-	Two small renal recurrent calculi impacted in urethra of a lad, who had suffered amputation of leg; first, removed by cutting down on stone; second, by forceps.
Operation for fistula in ano -	9	7	-	2	-	In all, the sphincters were divided; in two, incontinence of fæces resulted.
Sudden dilatation of stricture (Holt's operation).	2	1	-	-	1	One case successful; in the second, death resulted from urethral fever.
Paracentesis, vesical - - -	1	1	-	-	-	For retention of urine in a case of traumatic stricture. Through the rectum.
„ thoracic - - -	2	-	2	-	-	Two cases of empyema in medical wards. One ultimately died.
„ abdominal - - -	2	1	1	-	-	Two cases of ascites in medical wards.
„ for hydrocele - - -	12	12	-	-	-	In ten, the ordinary operation of tapping performed, with injection of Tr. Iodi. In two of small size, a seton of single worsted thread was used.

MEDICAL REPORT
OF THE
ROYAL NAVAL HOSPITAL AT PLYMOUTH,
FOR THE YEAR 1869,
BY
STAFF SURGEON AHMUTY IRWIN.

MEDICAL REPORT
OF THE
ROYAL NAVAL HOSPITAL AT PLYMOUTH,
FOR THE YEAR 1869.

DISEASES.		Remaining from last Return.	Received since.	Discharged Cured.	Invalided.	Dead.	Number now in Hospital.	Number of Days' Sickness.	Average Sickness for each Case.
General Diseases, Sec- tion A.	Small-pox - - -	1	1	2	-	-	-	45	22·5
	Chicken-pox - - -	-	1	1	-	-	-	24	24·
	Scarlet fever - - -	-	3	3	-	-	-	111	37·
	Measles - - -	-	28	28	-	-	-	748	26·7
	Typhus - - -	-	1	-	-	1	-	1	-
	Enteric fever - - -	-	10	7	1	2	-	594	59·4
	Simple continued fever -	3	14	16	1	-	-	497	29·2
	Ague - - -	-	4	3	-	-	1	56	14·
General Diseases, Sec- tion B.	Rheumatism - - -	11	123	110	14	-	10	433	30·1
	Gout - - -	-	2	2	-	-	-	35	17·5
	Purpura - - -	-	1	1	-	-	-	30	30·
	Phthisis - - -	9	93	23	53	19	12	5,808	54·2
	Tubercular peritonitis -	-	1	-	1	-	-	105	105·
Diseases of the Nervous System.	Meningitis - - -	-	5	1	1	3	-	198	37·6
	Paralysis - - -	1	12	2	6	2	3	816	62·7
	Progressive locomotor ataxy - - -	-	1	-	-	-	1	138	138·
	Vertigo - - -	-	6	3	2	-	1	265	44·1
	Epilepsy - - -	-	9	1	7	-	1	172	19·1
	Neuralgia - - -	-	19	18	-	-	1	482	25·3
	Chorea - - -	-	1	1	-	-	-	25	25·
	Insanity - - -	1	22	15	6	1	1	581	25·6
	Hypochondriasis - - -	-	2	1	-	-	1	73	36·5
	Convulsions - - -	-	3	3	-	-	-	60	20·
Diseases of Circulation	Diseases of the } Functional	1	46	25	22	-	-	1,517	32·2
	Heart, } Organic -	1	37	1	27	6	4	1,166	30·6
	Pericarditis - - -	-	3	1	-	1	1	52	17·3
	Aneurism - - -	-	5	1	2	1	1	286	57·2
Diseases of Respiration	Disease of Larynx - - -	-	6	3	3	-	-	286	47·6
	Catarrh - - -	-	59	57	1	-	1	617	10·4
	Bronchitis - - -	12	57	52	10	3	4	2,671	38·7
	Pneumonia - - -	9	69	52	7	13	6	2,697	34·6
	Pleurisy - - -	1	13	11	3	-	-	569	40·6

MEDICAL Report of the Royal Naval Hospital at Plymouth—*continued.*

D I S E A S E S.		Remaining from last Return.	Received since.	Discharged Cured.	Invalided.	Dead.	Number now in Hospital.	Number of Days' Sickness.	Average Sickness for each Case.
Diseases of the Digestive System.	Cynanche - - -	2	32	33	1	-	-	497	146
	Stomatitis - - -	-	2	2	-	-	-	21	105
	Dyspepsia - - -	-	69	65	4	-	-	1,300	188
	Dysentery - - -	-	5	3	-	-	2	134	268
	Diarrhœa - - -	-	9	9	-	-	-	118	13
	Colic and constipation - -	-	4	4	-	-	-	90	222
	Hematemesis - - -	-	1	1	-	-	-	14	14
	Peritonitis - - -	-	1	-	-	1	-	1	1
	Hepatitis - - -	2	10	8	2	1	1	451	375
	Jaundice - - -	-	4	4	-	-	-	74	188
Diseases of the Urinary System.	Bright's disease - -	1	12	4	5	3	1	578	444
	Hematuria - - -	-	2	2	-	-	-	28	14
	Diuresis - - -	-	1	1	-	-	-	13	13
	Renal calculus - - -	-	1	1	-	-	-	14	14
	Dropsy - - -	-	2	-	-	2	-	186	93
Diseases of Cellular Tissue.	Urticaria - - -	-	1	1	-	-	-	6	6
Unclassed - - -	Debility - - -	3	37	32	2	-	6	1,213	303
	Delirium tremens - -	-	14	12	-	1	1	112	8
	Lead palsy - - -	-	1	-	1	-	-	52	52
Wounds and Injuries -	Sprain - - -	-	1	1	-	-	-	10	10
	Submersion - - -	-	1	1	-	-	-	7	7
TOTALS - - -		58	872	628	182	60	60	29,667	319

MEDICAL REPORT

OF THE

ROYAL NAVAL HOSPITAL AT PLYMOUTH,

FOR THE YEAR 1869,

By Staff Surgeon **ARMUTY IRWIN.**

On the 1st of January 1869 fifty-eight cases remained in the medical wards. During the year 872 were added, making a total of 930 under treatment during the twelve months, of which 628 were discharged cured, 182 were invalided, sixty terminated fatally, and sixty were carried to the following year.

The per-centage of deaths to cases treated was -	-	-	6.45.
Ditto - - invaliding -	-	-	19.56.
The average duration of treatment was -	-	-	31.9 days.

Of the cases shown discharged cured, forty-seven have been discharged to the surgical wards for the treatment of diseases developed while in hospital, eight were discharged to Yarmouth Hospital, and four marines to their respective divisions to await survey.

Note.—The average number of days under treatment will appear large as compared with civil hospitals, which may be explained by the following facts.

1. That men are not discharged to duty on becoming convalescent, but are retained in hospital till their strength is completely restored, and they are fit for their active duties.

2. There are several Greenwich pensioners, old and infirm men, who reside permanently in the hospital, and others are under lengthened treatment for chronic disease.

3. Patients invalided but unfit to return to their homes are retained till their strength becomes sufficiently restored to enable them to undertake the journey, or, as occasionally happens, till their death.

GENERAL DISEASES. SECTION A.

Under this head there were sixty-six cases; of which sixty were discharged cured, three died, two were invalided, and one remains.

Of *Small-pox*, there were two cases; one each from the Bellerophon and Implacable; that from the former was contracted in London, when the patient had over-stayed his leave, that from the latter at Torquay in January.

In both the diseases were of a mild type, and there were distinct marks of successful vaccination. The average duration of treatment was 22.5 days.

Chicken-pox.—This case occurred in a boy from the Royal Adelaide. He was twenty-four days under treatment.

Scarlet Fever.—There were three cases, two in January, and one in September. One came from the Marine headquarters, and two from the Lion. The average duration of treatment was thirty-seven days.

Measles.—Of the twenty-eight cases, twenty-four were from the training ships Impregnable, Ganges, and Implacable. Of the remaining four, one was a young officer from the Liffey, two from the Liverpool, and one from the Marine headquarters. All the cases occurred in the first three quarters of the year, and were most numerous in the first and third. During the latter, the disease prevailed extensively in the neighbourhood of Plymouth and Devonport, and was in some cases fatal. The average treatment was 26.7 days.

Appendix.

Typhus Fever.—One case was received from the Cambridge.

Enteric Fever.—Of this disease there were ten cases, of which seven recovered, two proved fatal, and one was invalided. Of three cases in the first quarter, one terminated fatally; it was complicated with acute tuberculosis. Of the six in the third quarter, two came from the Impregnable, two from the Marine Divisional head quarters, and one each from the Cambridge and Pallas; one occurred in the fourth quarter. The average duration of treatment was 59.4 days.

The general treatment of the cases of enteric fever was supporting, with the use of stimulants as required, mineral acids, controlling diarrhoea, and attention to local symptoms as they arose.

Of *Simple Continued Fever* there were seventeen cases, of which sixteen were discharged to duty and one was invalided. The average duration of treatment was 29.2 days.

In two instances during the second quarter the disease was complicated with pneumonia, and there were marked indications in one of the enteric type, the bowel complaint being present, but the typical spots absent. One was invalided in consequence of the debility resulting from the fever and enuresis.

One case in the fourth quarter was received from His Prussian Majesty's ship Elizabeth. It was also complicated with double pneumonia, but made a good recovery after thirty-five days' sickness in hospital.

Of *Ague*, there were four cases, two of which refer to the same man, a marine from head quarters, who never had the disease abroad, and the third had recently returned invalided from Her Majesty's ship Lynx, at Ascension, for remittent fever contracted on an expedition up the Niger. He had in a great measure recovered on his arrival in England, and was discharged after a few days' treatment. The third was an old pensioner, who appears to have contracted the disease at Queenstown.

GENERAL DISEASES. SECTION B.

Under this head 245 cases are classed; of these, 136 were discharged to duty; nineteen died, all of phthisis; sixty-eight were invalided, and twenty-two remain in hospital.

Rheumatism.—Of 134 cases, 110 have been discharged to duty, fourteen invalided, and ten remain; the average duration of treatment was 30.1 days; five were foreign invalids, seventeen were complicated with organic disease of the heart, one with functional disease of the heart, and twelve with venereal affections.

One case under this head proved fatal, but the death is shown under Organic Disease of the Heart.

Purpura.—A delicate ill-nourished boy, newly entered, was admitted with this disease, and discharged cured in thirty days.

Of *Phthisis*, 107 cases came under treatment; the average duration of which, during the twelve months, was 54.2 days. In twenty-three the disease was chronic, and they were discharged to duty; fifty-three were invalided, nineteen died, and twelve remained at the end of the year; twenty-five cases added were foreign invalids, and of the total number, sixty-eight were blue-jackets and thirty-nine Marines.

The following table exhibits the most prominent symptoms in the fatal cases:

In two, there were pulmonary and laryngeal symptoms.

„ four, death was due to asthenia.

„ one, there was miliary tuberculosis and disease of the supra-renal capsules.

„ three, hæmoptysis was the prominent cause of, or immediately preceded, death.

„ one, there was acute tuberculosis.

„ three, the disease proved fatal by intercurrent pneumonia.

And in five, by exhaustion from diarrhoea and vomiting.

Tubercular

Tubercular Peritonitis.—The subject of this disease was a pale strumous looking boy of seventeen. He was 105 days in hospital with symptoms indicative of chronic disease of the peritoneum. He was discharged invalided in a much improved condition.

DISEASES OF THE NERVOUS SYSTEM.

Under this heading eighty-two cases have been classed; of which forty-five were discharged to duty, twenty were invalided, six died, and nine remain under treatment.

Progressive Locomotor Ataxy.—This case was 138 days under treatment, and remained in hospital at the end of the year. Some doubts were then entertained as to whether it was a case coming under that head, or some other obscure form of paralysis.

Meningitis.—There were five cases, of which three died, one was discharged to duty, and one was invalided. Four were boys from the training ships Implacable, Impregnable, and Ganges. The average length of treatment was 37·6 days.

Reference to the fifth case of meningitis is made under the head Chorea, the patient having suffered an attack of that nature subsequently.

In none of the cases sent with patients suffering from this disease was its origin traced, nor was any cause assigned.

Paralysis.—There were thirteen cases, of which two were sent to duty, two died, six were invalided, and three remained in hospital to the end of the year. The average duration of treatment was 62·7 days. The cases may be classed under the following heads:—

- Two were dependent on cerebral softening ;
- One was dependent on abscess of the brain ;
- One was attributed to a blow on the head ;

In seven the cause was doubtful ;

In one, a foreign invalid from the Cape of Good Hope, the disease commenced and progressed slowly, without being traced to any cause ;

In another, a chronic case, received from Greenwich Hospital, there was no history.

Of *Vertigo* there were six cases, of which three were discharged to duty, two were invalided, and one remained. The average duration of treatment was 44·1 days.

Two cases were the result of injury and sunstroke. One was a man who suffered repeatedly from dysentery and diarrhoea abroad. The others were of a doubtful nature.

Epilepsy.—Of this disease nine cases appear in the Table, of which one was discharged to duty, seven were invalided, and one remained; two were boys; in neither was the cause of the affection assigned; two were able seamen, one of whom had already been invalided; two were Marines, in one of which the disease was due to chronic disease of the brain, in the other to syphilis. In three cases in adults, one was attributed to a blow on the testes, and in the others no cause was assigned.

Neuralgia.—There were nineteen cases, eighteen of which were discharged to duty, and one remained.

The average duration of treatment was 25·3 days. None of the cases presented any features calling for remark.

Chorea.—There was one case, which was discharged to duty after a treatment of twenty-five days; the symptoms were somewhat obscure; the patient had already been under treatment for spinal meningitis.

Insanity.—Of this there were twenty-three cases, fifteen of which are shown as discharged to duty; one died. Of the whole number four were foreign invalids; six were invalided, and went home to their friends; and one remained in hospital.

Appendix.

Of fifteen shown sent to duty, eight were sent to Yarmouth. In seven the cases were as follows:—

- Two, injuries of the head ;
- One, following fever ;
- One, following acute rheumatism ;
- One, consequent on injury of the head and intemperance ;
- One, consequent on domestic grief ;
- One, consequent on sunstroke, and hereditary predisposition.

In the others the history was obscure, and the causes undetermined.

In the case following fever the patient had two attacks during the year, and was eventually discharged invalided, at the request of his father.

The average time in hospital was 25·6 days.

Hypochondriasis.—Two cases, of which one was sent to duty, and one remained. Average duration of treatment for the year, 36·5.

Convulsions.—There were three cases, which were discharged to duty after an average treatment of twenty days.

DISEASES OF THE CIRCULATORY SYSTEM.

Ninety-three cases were under treatment, of which twenty-eight were sent to duty ; fifty-one were found unserviceable, and invalided ; eight cases terminated fatally, and six remained in hospital.

Functional Diseases of the Heart.—There were forty-seven cases, twenty-five of which were discharged to duty, and twenty-two were invalided ; the average duration of treatment being 32·2 days. Of functional disease of the heart, twenty-five cases occurred among the Marines, and nearly an equal number among the blue-jackets.

It was, in many instances, due to the abuse of tobacco and stimulants. Taking all cardiac affections together, the proportion among the Marines was much larger than among the blue-jackets, and appears fairly attributable to interference with the respiratory and circulatory functions, caused by the style of dress and accoutring when on march and at active drill.

Organic Diseases of the Heart.—There were thirty-eight cases, one of which was discharged to duty, six terminated fatally, twenty-seven were invalided, and four remained in hospital. The average duration of treatment was 30·6 days.

In twenty-one cases the organic disease was traceable to acute rheumatism ; in one it supervened on pneumonia ; and in the remainder the history obtained was unreliable. In some, however, a venereal taint was ascertained to have existed. (One of the fatal cases under this heading proved, on post-mortem, to have been a case of aneurism).

Pericarditis.—There were three cases ; one was discharged to duty, one died, and one remained in hospital. The average duration of treatment was 17·3 days.

Aneurism.—There were five cases ; one discharged to duty, one was fatal, two were invalided, and one remained in hospital.

DISEASES OF THE RESPIRATORY SYSTEM.

Two hundred and twenty-six cases have been under treatment, with a result of—

- 175 discharged cured,
- 24 invalided,
- 16 dead, and
- 11 remaining in the wards.

Diseases of the Larynx.—There were six cases ; three were discharged to duty, and three were invalided. The average duration of treatment was 47·6 days. One was a foreign invalid, in which the loss of the voice was well nigh complete. The commencement of the affection was referred to exposure when a prisoner of war in Russia, subsequent to the destruction of Her Majesty's ship *Tiger*. In two there was a venereal taint, and the others followed common colds.

Of

Of *Catarrh* there were fifty-nine cases, of which fifty-seven were discharged to duty; one was invalided, and one remained. The average duration of treatment was 10·4 days. All the cases were mild in their nature, and occurred principally in the first and second quarters. One is shown as invalided; in it phthisis became subsequently developed.

Of *Bronchitis*, sixty-nine cases were under treatment; fifty-two were discharged cured, three were shown as having terminated fatally, ten were invalided, and four remained. The average duration of treatment was 38·7 days. The largest number of cases occurred during the first and second quarters. In the cases shown as fatal, serious complications existed; in one, cancer of the liver; in a second, aneurism of the aorta; and in the third, organic disease of the heart and kidneys.

Pneumonia and Pleurisy.—Ninety-two cases came under treatment, of which sixty-three were discharged to duty, thirteen died, ten were invalided, and six remain. The average duration of treatment in pneumonia was 34·6 days, and in pleurisy 40·6. All the deaths appear under the head of pneumonia; and of the cases invalided, seven are shown under the head of pneumonia, and three under pleurisy.

These diseases are taken conjointly, as they were in numerous instances complicated the one with the other. During the first, second, and third quarters, the largest numbers were received into hospital.

In the early part of the first quarter of the year, the diseases were mild, and the cases were soon convalescent. There were three fatal cases, one complicated with tubercle, and two with pericarditis; but in the latter they were of more than the ordinary severity.

In the second quarter, the disease was also severe, and there were five deaths consequent on it. In some, both the lungs, and in all, the pleurae were implicated, and in one, the pericardium.

During the third quarter, the largest proportion of cases was received from Her Majesty's ship *Impregnable*, training ship for boys. Of these, one only proved fatal. The other two deaths, during the quarter, occurred in adults in whom the disease ran a rapid course.

During the fourth quarter, all the cases received into hospital made remarkably good recoveries. Two cases, which terminated fatally, were received at too late a period for treatment to have been of much avail.

In both, the pneumonia was double, and death ensued within eighteen hours in the first case, and forty-eight in the second.

The fatal cases in the third quarter were one in a boy and two in adults. The former fatal in three days, the others respectively in three and six days. In two, a post-mortem examination was refused. In the third, both lungs and pleurae were engaged.

Two cases shown as fatal in the fourth quarter, were pneumonia, involving both lungs; one died the morning after admission, and the other the second day after admission.

DISEASES OF THE DIGESTIVE SYSTEM.

One hundred and forty-one cases were under treatment; of which 129 were sent to duty, two died, seven were invalided, and three remained in hospital.

Cynanche.—There was thirty-four cases under treatment; thirty three were discharged to duty, and one invalided. The average duration of treatment was 14·6 days. The case shown invalided, occurred in a young ordinary seaman found to be of weak intellect, and unfit for further service.

Stomatitis.—Two cases were discharged to duty, the duration of treatment being 10·5 days.

Dyspepsia.—Sixty-nine cases, of which sixty-five were discharged cured, and four were invalided. The average duration of treatment was 18·8 days. Of the whole number, four cases were invalids from foreign stations; and of those shown as sent to duty, one was a Marine discharged to his own division, in whom organic disease of the heart had been diagnosed.

Appendix.

A large proportion of the cases were ascertained to be due to intemperance and excess.

Of the four cases invalided, one had an abdominal aneurism; one suffered from a chronic form of the disease; a third had chronic vomiting, following attacks of intermittent fever and dysentery, when serving in the River Plate; and in the fourth, phthisis supervened while the patient was in hospital. As the case of aneurism did not terminate in hospital, little may be said of it. The prominent symptoms were pulsation in the abdomen, with a loud bruit, vomiting immediately after meals, and occasional hæmorrhage from the bowels.

Dysentery.—Five cases came under observation, of which three were sent to duty, and two remained under treatment; the average duration of which was 26·8 days. The two remaining were both invalids from this disease from China. One had been sinking gradually since admission, and could not be expected to survive long. The second was a case remarkable from the complication of evils under which the patient laboured, and yet lived. He had been placed on the sick-list of Her Majesty's ship Ocean a year previously, suffering from syphilis and gonorrhœa, which were followed by extravasation of urine, and lastly by dysentery. His emaciation was very great, and two fistulæ existed on the under surface of the penis, but his dysenterial symptoms had been relieved, and general health improved since admission.

Diarrhœa.—There were nine cases, all of which were discharged to duty after an average treatment of thirteen days. In three instances the disease was traced to previous attacks on the China, and one on the West India station. The others were due to indiscretions in diet.

Colic and Constipation.—Four cases, all of which were discharged cured after an average treatment of 22·2 days.

Hæmatemesis.—One case was discharged to duty, having been fourteen days under treatment. The disease in this case was due to the immoderate indulgence in spirits.

Peritonitis.—One case occurred which proved fatal within twenty-four hours of admission.

Hepatitis.—There were twelve cases; eight were discharged to duty, one died, two were invalided, and one remained under treatment, the average duration of each was 37·5 days.

Of these cases, two were admitted as invalids from the East Indies; one was recently invalided from the Pacific for hepatic disease; one was invalided from the Charybdis, in Australia, the previous year, for hepatitis. Another case terminating in suppurative inflammation of the portal veins, and death; the subject of which suffered from chronic hepatitis some years before on the West Indian station. Another which terminated in abscess of the liver; the patient, who remained in hospital at the end of the year, had suffered severely from dysentery in China, which had recurred at irregular intervals. One followed yellow fever in the West Indies. One, an acute attack, in the West Indies.

The others were of minor importance.

Jaundice.—Four simple cases in boys from the training ships, all of which were sent to duty. The average duration of treatment was 18·5 days.

DISEASES OF THE URINARY SYSTEM.

There were nineteen cases under treatment; eight were sent to duty, five terminated fatally, five were invalided, and one remained in hospital.

Bright's Disease.—There were thirteen cases; four were discharged to duty, three died, five were invalided, one remained; and the average duration of treatment was 44·46 days.

In six cases the disease was due to cold; in two it was referred to injuries; in one it supervened on repeated attacks of gout. One was a case of old standing renal disease, for which the patient had been invalided five years before from the West Indies, and in three there was not any cause assigned.

Hæmaturia.

Hæmaturia.—Two cases, with an average treatment of fourteen days; one was discharged to duty cured; and in the second, shown as discharged cured, the symptoms were found to be dependent on the presence of calculus in the bladder, and the patient was transferred to the surgical wards.

Diuresis.—One case discharged cured after treatment of twelve days. His discharge, though appearing among the number cured, was to the surgical wards, for the treatment of a venereal complaint.

In 1867 he had been invalided from Ascension Hospital for paralysis.

Renal Calculus.—One case was discharged cured after treatment of fourteen days. There was nothing in the case worthy of remark.

Dropsy.—There were two cases, both of which terminated fatally, after an average treatment of ninety-three days.

Urticaria.—One case, which was discharged to duty after six days. It was sent in as a case of scarlet fever. The eruption, which was very marked on the face and trunk, had quite disappeared by the following morning.

Debility.—There were forty cases, of which thirty-two were discharged to duty; two were invalided, and six remained in the wards. Their average duration of treatment was 30·3 days.

Fifteen were invalids from foreign stations, as follows :—

Four from the Mediterranean, for debility following the fever peculiar to that station, and one for simple debility not traceable to any particular cause.

Six were from the West Coast of Africa, following the fevers of that climate.

Two were from the West Indies, one in consequence of syphilis, and one after diarrhoea.

One from the Cape of Good Hope, and

One from the South East Coast of America, for debility following ague and dysentery.

Five of those remaining are cases of the debility of old age in men who had resided in Greenwich Hospital, but were removed here on the closing of that establishment.

Delirium Tremens.—There were fourteen cases; twelve were discharged cured, one terminated fatally, and one remained; the average duration of treatment was eight days.

Four-sevenths of the whole were marines from the divisional headquarters, and the remainder would come under the head of blue-jackets.

The fatal case was due to fracture of the base of the skull and other injuries, the patient having, during the momentary absence of the attendant, precipitated himself from a window, a height of twenty-six feet.

Lead Palsy.—A man, twenty-five years of age, brought up as a painter, was the subject of this affection. At the time of his attack he was serving on board the Royal George at Kingstown, where he appeared to have been a frequent sufferer from the poisonous effects of lead, and he had previously been two months under treatment in hospital for a similar affection. He was invalided after a treatment of fifty-two days.

Sprain.—A case was ten days under treatment; it occurred in one of the attendants in the medical wards.

Submersion.—One case, shown as discharged to duty. He was received into hospital suffering from the effect of being a long time under water, having fallen overboard from the Impregnable. He was transferred to the surgical wards for an injury of the thigh received at the same time, after treatment of seven days.

During 1869 paracentesis thoracis was performed in two cases, and paracentesis abdominis also in two cases.

MEDICAL AND SURGICAL REPORTS
OF
MELVILLE HOSPITAL, CHATHAM,
FOR THE YEAR 1869,
BY
DEPUTY INSPECTOR GENERAL HENRY J. DOMVILLE, M.D., C.B.

MEDICAL REPORT of the ROYAL NAVAL HOSPITAL at CHATHAM, between the 1st of January and the 31st December 1869.

DISEASES.		Number remaining from last Return.	Received since.	Discharged cured.	Invalided.	Dead.	Number now in Hospital.	Average Number of Days in Hospital.
I. General Diseases, Section A.	Scarlet Fever - - -	2	8	8	-	-	2	28
	Enteric Fever - - -	-	5	1	-	3	1	46
	Simple continued Fever - - -	-	1	1	-	-	-	18
	Ague - - - - -	2	10	10	2	-	-	18
	Febricula - - - - -	-	3	3	-	-	-	15
	Pertussis - - - - -	-	1	1	-	-	-	28
	Parotides - - - - -	-	3	3	-	-	-	37
II. General Diseases, Section B.	Rheumatism - - - -	8	91	74	21	1	3	35
	Gout - - - - -	-	2	2	-	-	-	8
	Phthisis Pulmonalis -	6	34	8	24	4	4	40
III. Diseases of the Nervous System and Organs of the Special Senses.	Syncope - - - - -	-	1	1	-	-	-	2
	Apoplexy - - - - -	-	1	-	-	1	-	-
	Sunstroke - - - - -	-	1	1	-	-	-	2
	Vertigo - - - - -	-	11	6	5	-	-	37
	Paralysis - - - - -	-	2	1	1	-	-	41
	Myelitis - - - - -	-	1	1	-	-	-	26
	Brain Disease - - -	-	1	1	-	-	-	24
	Epilepsy - - - - -	1	5	1	5	-	-	25
	Neuralgia - - - - -	-	5	5	-	-	-	9
	Dementia - - - - -	1	5	2	{ 2 } 2	-	-	9
	Visus Brevior - - -	-	3	-	3	-	-	29
IV. Diseases of the Circulatory System.	Diseases of the { Functional	2	36	20	18	-	-	37
	Heart. { Organic -	1	18	2	14	2	1	31
	Pericarditis - - - -	-	1	-	-	1	-	2
VII. Diseases of the Respiratory System.	Diseases of the Larynx -	-	3	1	2	-	-	27
	Catarrh - - - - -	1	56	55	-	-	2	11
	Bronchitis - - - - -	1	40	35	5	-	1	34
	Asthma - - - - -	-	2	-	1	-	-	16
	Pneumonia - - - - -	1	8	6	-	3	-	24
	Pleurisy - - - - -	-	4	2	-	-	2	40
	Hæmoptysis - - - - -	-	2	2	-	-	-	16
VIII. Diseases of the Digestive System.	Cynanche - - - - -	3	29	30	-	-	2	13
	Dyspepsia - - - - -	3	48	45	5	-	1	22
	Dysentery - - - - -	-	3	2	1	-	-	37
	Diarrhoea - - - - -	-	17	17	-	-	-	8
	Colic and Constipation -	1	5	4	1	-	1	8
	Hepatitis - - - - -	1	10	6	4	-	1	37
	Jaundice - - - - -	2	6	6	1	1	-	28
IX. & X. Diseases of the Urinary System.	Bright's Disease - - -	-	3	2	-	-	1	26
XII. & XIII. Diseases of the Cellular Tissue, &c.	Urticaria - - - - -	-	3	3	-	-	-	6
	Impetigo - - - - -	-	2	2	-	-	-	123
	Herpes - - - - -	-	2	2	-	-	-	6
Unclassed - - - -	Debility - - - - -	-	14	6	7	-	1	27
	Delirium Tremens - - -	-	2	1	-	-	1	6
TOTAL - - -		36	508	379	124	17	24	

• To Yarmouth Hospital.

n 3

MEDICAL REPORT

OF

MELVILLE HOSPITAL, CHATHAM,

FOR THE YEAR 1869,

By Deputy Inspector General HENRY J. DOMVILLE, M.D., C.B.

Appendix.

THE total number of cases admitted during the year was 1,276, of whom 911 were from the Marine division, 284 naval officers and seamen, sixty-five artisans and labourers from the dockyards at Chatham and Sheerness, nine pensioners, five policemen, and two military officers from the garrison, for whom no hospital accommodation is otherwise provided.

Besides the above number of in-patients, there were about 2,018 out-patients seen and prescribed for, either at the hospital or attended at their own homes; the approximate number of women and children, comprising the families of the officers and men of the Royal Marines, who are entitled to the attendance of the medical officers of the hospital, being 2,373.

In viewing the average number of days that each patient was under treatment, it must be borne in mind that this establishment unites the duties of a regimental and general hospital, and that many trivial cases are admitted from the Marine division for causes that interfere but very little with the health of the patients, but incapacitate them from active duty only for a short time; while, on the other hand, many grave accidents and cases of importance are received from time to time from the dockyards and ships in harbour, and also invalids from foreign stations.

GENERAL DISEASES (Sect. A.)

Scarlatina.—Two cases remained from the previous year, and there were subsequently eight cases admitted, of which there were again two remaining at the end of this year. Two of these came from Sheerness, two were officers of the Royal Engineers, two Marines from headquarters, and two policemen were admitted from the police married quarters in the dockyard, in October, where the disease was prevailing at the time. The other cases occurred sporadically.

Enteric Fever.—There were five cases of this disease. One, a seaman from Her Majesty's ship *Megara*, was discharged cured, after thirty-seven days' illness; three proved fatal; and one case remains under treatment. Of the three who died, one was a Marine, in whom the disease was complicated with a large hepatic abscess and general tuberculosis; one a seaman from the Reserve at Sheerness; in this case all the diagnostic symptoms, except that the eruption was not seen, were well marked, and the autopsy revealed extensive ulceration of the ileum and border of the ileo-cæcal valve; the third was a pensioner, received from his home in Chatham.

Simple Continued Fever.—Only one case; a Marine from headquarters was admitted, and discharged cured, after eighteen days' illness.

Ague.—Two cases remained from last Report, and ten were admitted, of whom six were Marines from the Chatham division, and had probably contracted the disease in the marshes near Gravesend, while undergoing their periodical rifle instruction; and four were from the Reserve at Sheerness, where the disease is always

always prevalent. Of these, two were invalided, one for epilepsy and one for disease of the heart; and ten were discharged to duty, after an average period of eighteen days in hospital.

Febricula.—Three cases admitted, which, after an average of fifteen days' treatment each, were discharged cured.

Pertussis.—One case, an ordinary seaman, *et.* twenty-two, received from Reserve, Sheerness; discharged cured. Twenty-eight days under treatment.

Parotides.—Three cases of this disease were received, all from the Marine barracks, one of which was seventy-eight days under treatment, suppuration of the gland having taken place, increasing the average number of days' treatment to thirty-seven.

II. GENERAL DISEASES (Sect. B.)

Rheumatism.—Eight cases remained from the last return, and ninety-one were received during the year, of which sixty-five were Marines, twenty-one seamen from the Reserve and ships, and five others. Of these seventy-five were discharged cured; fifteen Marines and six seamen were invalided; and one case admitted under this head proved fatal, from rupture of a large aneurism of the abdominal aorta.

The average number of days for the treatment of rheumatism was thirty-five.

Gout.—Two cases only, occurring respectively in an officer and serjeant of Marines; the average number of days under treatment was eight.

Phthisis.—There remained from last return, and were admitted, no less than forty cases of this disease, of which eight were discharged to duty relieved, twenty-four cases were found unfit for further service, and four proved fatal in hospital, leaving four still under treatment. Average number of days under treatment, forty.

III. DISEASES OF THE NERVOUS SYSTEM, &c.

Syncope.—A Marine was admitted, having fainted while on guard, and was discharged without any further symptoms, after two days' observation in hospital.

Apoplexy.—One case, that of a warrant officer who died at his own home, and whose corpse was received for interment.

Sunstroke.—One case was admitted under this head, and kept two days in hospital, the patient having been relieved from his post as sentry under a hot sun in July, with headache and vertigo.

Vertigo.—Eleven cases were admitted to hospital suffering with this symptom, six of which were discharged cured, and five were invalided; one was the case of a serjeant of Marines, in which the giddiness appears to have been symptomatic of incipient softening of the brain. Four cases (of seamen) also were invalided for this disease, all of which were attributable to injuries of the head, received at periods long antecedent to their admission to hospital, and while on duty. Average number of days under treatment, thirty-seven.

Paralysis.—There were two cases of this disease, one that of a policeman, who had been recently in hospital for rheumatism; he suffered from slight hemiplegia, but the disease gave way to treatment after seventeen days. The other was also a case of hemiplegia, occurring in a seaman, *et.* eighteen. After sixty-five days' hospital treatment he was discharged.

Myelitis.—One case was admitted for this disease, the result of exposure to cold. He was twelve days under treatment in the Reserve at Sheerness, and was discharged cured, after thirty-six days in hospital.

Brain Disease.—The case entered under this name was that of a Marine, who had been under treatment at Haslar for vertigo, in addition to which he suffered from nervous tremors and debility; he was discharged cured, after twenty-four days.

Epilepsy.—One case remained from last year, and five were subsequently admitted; all of these were Marines. One was discharged to duty, but subsequently re-admitted, so that all were invalided. The average number of days in hospital was twenty-five.

Appendix.

Neuralgia.—Five cases were admitted, none possessing any particular interest; the average time under treatment being only nine days.

Dementia.—One case remained from last year's Report, and five were subsequently admitted, of which one was a re-admission, having been discharged after some time in hospital under observation, and subsequently invalided for "weak intellect." Two were sent to the Lunatic Asylum at Yarmouth, and one returned to duty. The average time they were kept in hospital under treatment was nine days.

Visus brevis.—Of this form of defective vision there were three cases, in which no actual lesion could be detected; but the defect had come on gradually in each case, and was dependent upon dyspepsia in two, and connected with tubercular disease in the other. They were all invalided, after an average of twenty-nine days in hospital.

IV. DISEASES OF THE CIRCULATORY SYSTEM.

Diseases of the Heart.—Three cases remained, and fifty-four were admitted, of whom thirty-two were found unfit for further service, and two proved fatal. Out of twenty-two discharged cured, twenty were cases of functional derangement. Of the two cases of organic disease that appear as cured, one was a Greenwich pensioner, *æt* 52, who was discharged at his own request; and the other a shipkeeper, also a pensioner, in whom the disease was not advanced, but complicated with chronic dysentery, and on this being relieved he was discharged to his duty. Of the fatal cases, one was a boatswain of the Reserve, Sheerness, *æt* 47, who had cardiac dropsy; the other, that of a Marine, *æt* 38, admitted from barracks on the 19th of August 1869.

Nearly all those cases entered as functional disease of the heart occurred in young lads and was generally connected with weak physical development, struma or tuberculosis, and its chief symptoms were palpitation and shortness of breath.

Pericarditis.—There was only one admission for this disease, which proved fatal on the second day.

VII. DISEASES OF THE RESPIRATORY SYSTEM.

Of 118 cases, three remained from the previous year; of these 101 were discharged cured; eight were found unfit for further service, and four proved fatal. Of those who were invalided, two, were for aphonia, five, chronic bronchitis, and one, asthma; and of those that proved fatal, one, died of asthma and three, of pneumonia.

VIII. DISEASES OF THE DIGESTIVE SYSTEM.

Cynanche.—Of this form of disease, three remained and twenty-nine were admitted to hospital, all of which occurred chiefly during the damp weather of spring and autumn. They were all local cases, twenty-seven being from the Marine barracks and two from the dockyard police. In one of these cases excision of the tonsils was performed, and the average duration of each case was thirteen days.

Dyspepsia.—There were forty-eight admissions for this complaint, the majority of which may be attributed to the immediate result of intemperance and were only a few days in hospital; twenty-nine cases giving an average of only five days' treatment; a few cases were of graver character, and in some instances dependent upon climatic influence; five were invalided.

Dysentery.—There were three admissions for this disease, viz., two Marines and one seaman, all of whom had contracted it while serving in the tropics; one case assumed a chronic form and was invalided after sixty-two days in hospital.

Diarrhœa.—Seventeen cases were admitted, of which sixteen were from the Marine division; these cases occurred during the autumn months, and were of slight importance.

Colic and Constipation.—One case remained from last year and five were subsequently admitted.

Hepatitis.

Hepatitis.—One case remained and ten were subsequently admitted ; of these, six were discharged cured, four, invalided, and one, still remains under treatment. Of those discharged cured, only one case was contracted on foreign service, whereas of the four who were discharged unfit for service, all had been previously invalided from the East Indies, and one had served in that climate for ten years as a soldier in the 81st Regiment. The average time that these cases were retained in hospital was forty-two days.

Jaundice.—Two cases remained from last return, in one of which, the patient was admitted for this disease but retained in hospital with palpitation and debility for which he was subsequently invalided ; six were admitted, one of which proved fatal. The average duration in hospital of these seven cases, was seventeen days.

IX. & X. DISEASES OF THE URINARY AND GENERATIVE SYSTEMS.

Bright's Disease, &c.—Three cases of albuminuria were admitted, two of which were discharged to duty. In the second case the albuminuria was due to renal hæmorrhage. The other was the case of a Marine pensioner who had been previously invalided for the same complaint, and still remains under treatment.

XII. & XIII. DISEASES OF THE CELLULAR TISSUE AND CUTANEOUS SYSTEM.

The only diseases under this category, treated in the medical wards, were,—

Urticaria.—Three cases, averaging eight days each under treatment ; and

Herpes.—Two mild cases of Herpes Zoster were under treatment, five and eight days respectively.

DISEASES UNCLASSED.

Debility.—Fourteen cases were entered under this head, in some of whom there was no other appreciable complaint. Seven were invalided, and in these the debility was traceable to phthisis, in three ; muscular tenuity and previous rheumatism in two ; intemperance in one ; chronic dysentery and hepatic disease in one.

Delirium Tremens.—Only two admissions for this disease ; one was discharged to duty after three days in hospital, and one, admitted on the 22nd December, remains.

**SURGICAL REPORT of the ROYAL NAVAL HOSPITAL at Chatham, between the
1st of January and the 31st December 1869.**

DISEASES.		Number remaining from last Return.	Received since.	Discharged Cured.	Invalided.	Dead.	Number now in Hospital.	Average Number of Days in Hospital.
I. General Diseases, Section A.	Erysipelas - - -	-	8	5	-	1	2	23
II. General Diseases, Section B.	Syphilis, Primary - -	13	162	164	3	-	8	38
	Syphilis, Secondary - -	3	47	42	3	-	5	36
	Scrofula - - - -	-	4	2	2	-	-	50
	Cancer - - - -	-	1	-	1	-	-	65
III. Diseases of the Nervous System and Special Senses.	Iritis - - - -	2	1	2	-	-	1	96
	Conjunctivitis - - -	-	8	8	-	-	-	16
	Ophthalmia - - - -	2	7	7	2	-	-	62
	Amaurosis - - - -	1	3	1	3	-	-	46
	Diseases of the Ear - -	-	3	2	1	-	-	29
IV. Diseases of Circulatory System.	Varicose Veins - - -	-	12	2	9	-	1	18
V. & VI. Diseases of the Absorbent System, &c.	Bubo (<i>Symp.</i>) - - -	1	20	17	-	-	4	37
VIII. Diseases of the Digestive System.	Hæmorrhoids - - - -	-	6	5	1	-	-	44
	Condyloma - - - -	-	2	2	-	-	-	23
	Hernia - - - -	-	6	1	5	-	-	13
	Fistula in Ano - - -	1	1	1	1	-	-	63
IX. & X. Diseases of the Urinary and Generative Systems.	Cystitis - - - -	-	1	1	-	-	-	68
	Fistula Perineal - - -	1	1	1	1	-	-	97
	Retention of Urine - -	-	1	1	-	-	-	3
	Gonorrhœa - - - -	2	104	97	1	-	8	25
	Spermatorrhœa - - -	-	1	1	-	-	-	22
	Stricture - - - -	-	9	7	1	-	1	65
	Varicocele - - - -	-	1	1	-	-	-	107
	Orchitis - - - -	1	34	35	-	-	-	32
	Hydrocele - - - -	-	4	3	1	-	-	19
XI. Diseases of the Organs of Locomotion.	Diseases of the Bones -	2	7	6	3	-	-	30
	Diseases of the Joints -	1	8	5	4	-	-	46
	Diseases of the Bursæ -	-	2	1	1	-	-	27
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System.	Phlegmon and Abscess -	7	60	64	1	-	2	17
	Ulcer - - - -	6	45	43	4	-	4	30
	Eczema - - - -	-	5	4	1	-	-	73
	Tumour - - - -	-	3	3	-	-	-	34
	Clavus - - - -	-	1	1	-	-	-	4
	Scabies - - - -	-	18	18	-	-	-	13
	Leprosy - - - -	-	1	1	-	-	-	14
	Psoriasis - - - -	-	3	3	-	-	-	17
Wounds and Injuries	Wounds - - - -	2	41	41	1	-	1	22
	Fractures - - - -	3	18	16	3	1	1	60
	Dislocations - - - -	-	1	1	-	-	-	11
	Sprains - - - -	2	31	33	-	-	-	22
	Contusions - - - -	2	56	52	2	-	4	15
	Burns and Scalds - - -	-	13	6	-	3	4	25
	Concussion of Brain - -	-	7	4	2	1	-	30
	Poisoning - - - -	-	1	1	-	-	-	2
TOTALS - - -		52	768	711	57	6	46	

SURGICAL REPORT

OF THE

Appendix.

ROYAL NAVAL HOSPITAL, CHATHAM.

I. GENERAL DISEASES (Sect. A.)

Erysipelas.—Eight cases of erysipelas were admitted into hospital; five were discharged to duty, one died, and two remained in hospital. The fatal case occurred in the person of a dockyard labourer from Sheerness, æt. forty-nine, supervening on injury to little finger.

II. GENERAL DISEASES (Sect. B.)

Syphilis.—From various sources there were 209 cases of syphilis admitted; of these 162 were of the primary disease, and forty-seven of the secondary form. None of these cases possess any individual interest. The primary disease showed itself most frequently in the form of soft chancre; the secondary form presenting itself either as suppurating bubo, sore throat, or some one or other of the various forms of skin disease, amenable to the treatment, most generally adopted here, of mercurial fumigations and the exhibition of iodide of potass in large doses.

A comparison of the numbers admitted this year with those admitted during the four previous years will show the marked improvement, in respect to these diseases, of the sanitary condition of our seamen and Marines at this port since the introduction of the Contagious Diseases Act (*vide* Table A.) This improvement has been gradual and progressive, notwithstanding the sudden great increase in the number of cases this year over the preceding one, which is to be accounted for chiefly by the great addition made to the number of men for whom the return is rendered, by the accession of 466 men from the Woolwich division of Marines which was broken up in March.

The proportion of disease contracted in the districts protected by the Contagious Diseases Act is small compared with the number of cases contracted elsewhere, as the subjects of the disease are for the most part residents of the district in which the Act is in force, a *prima facie* evidence that there is either less disease or more morality in these localities, and speaks most favourably of the working of the Act and the desirability of its extension (*vide* Table B.)

TABLE A.
ADMISSIONS for Syphilis from 1865 to 1869.

Y E A R.	Primary Syphilis.	Secondary Syphilis.	TOTAL.
1865 - - - -	330	98	428
1866 - - - -	217	61	278
1867 - - - -	209	56	265
1868 - - - -	135	25	160
1869 - - - -	162	47	209

TABLE B.

TABLE showing the Number of Admissions of Cases of Venereal Disease during 1869, with the Number of Days' Sickness from each Form, distinguishing those contracted in Districts protected by the Contagious Diseases Act, from those contracted in other Places in England, and those imported from Foreign Stations.

DISEASES.	Contracted in Protected Districts.		Contracted in England, in Districts not under Contagious Diseases Act.		Contracted Abroad.		Total of Admissions to Hospital.	
	Cases.	Days' Sickness.	Cases.	Days' Sickness.	Cases.	Days' Sickness.	Cases.	Days' Sickness.
Primary Syphilis - -	122	5,090	39	1,858	1	50	162	6,998
Secondary Syphilis - -	19	861	22	732	6	202	47	1,795
Gonorrhoea - - -	82	2,268	21	832	1	8	104	3,108
TOTAL - - -	223	8,219	82	3,422	8	260	313	11,901

Scrofula.—Four cases of scrofula were admitted during the year, of which two were discharged cured and two invalided. They were of no surgical importance.

Cancer.—One case of cancer was admitted; it occurred in a corporal of Marines. The disease was situated in lower lip, and the sub-maxillary gland was enlarged. It appears to have originated in a burn of the lip about four years ago. The ulcerated portion and surrounding indurated parts were excised. The patient was eventually invalided, in consequence of deformity and general cachexia.

III. DISEASES OF THE NERVOUS SYSTEM AND ORGANS OF THE SPECIAL SENSES.

Iritis.—Two cases of iritis remained from last return, and one case of syphilitic iritis was subsequently admitted. The subjects of the two former were shipwrights from Her Majesty's dockyard at Sheerness, and the disease resulted from direct injury having been caused in both instances by a chip of copper lacerating the cornea and wounding the iris. They were both discharged, with the vision of the injured eye much impaired, having been respectively sixty-nine and forty-five days under treatment. The case of syphilitic iritis remained under treatment on the 31st December 1869.

Conjunctivitis.—Eight cases of this disease occurred, and all were discharged cured. The average duration of the treatment was sixteen days. All the cases were unimportant in their nature.

Ophthalmia.—Two cases remained from last return; seven were since received. Of these, seven were discharged cured, and two invalided. In one case, vision was very defective, and there was a history of syphilis. He was subsequently invalided. In one of the cases remaining from last return, the ophthalmia was followed by double amaurosis. He was invalided.

Amaurosis.—One case of this disease remained from last return. Three were since received; one was discharged cured, and three invalided. In two of the invalided cases both eyes were affected. In one the disease commenced four years

years ago, and gradually became worse, until vision of the right eye was lost, and the sight of the left much impaired.

Diseases of the Ear.—Three cases were admitted during the year; two were discharged cured, and one invalided. These cases were not of any surgical importance. In the case invalided there was deafness of both ears.

DISEASES OF THE CIRCULATORY SYSTEM.

Varicose Veins.—Twelve cases were admitted during the year. Two were discharged to duty, nine were invalided, and one remains under treatment. In most of these cases the disease was so far advanced that the men were unable to undergo the exertion required in drilling, running, marching, &c.

DISEASES OF THE ABSORBENT SYSTEM, &c.

Bubo (Symp.)—One case of this disease remained from last return, twenty were subsequently received into hospital. Of these, seventeen were discharged cured, and four remain under treatment.

DISEASES OF THE DIGESTIVE SYSTEM.

Hæmorrhoids.—Six cases were received into hospital, five were discharged cured, and one was invalided. The case invalided was that of a private Marine, who was under treatment for hæmorrhoids, but was found to suffer from morbus cordis, for which disease he was invalided on the 19th of October 1869.

Condyloma.—Two cases remained from last return, and were discharged cured. The average duration of treatment was twenty-three days.

Hernia.—Six cases were received, one was discharged cured, and five were invalided.

Fistula in Ano.—One case remained from last return, one, was received since, one, was discharged cured, and one, was invalided.

IX. & X. DISEASES OF THE URINARY AND GENERATIVE SYSTEMS.

Cystitis.—One case of this disease was received, and was discharged cured. The chief symptoms were pubic pain, frequent micturition, and hæmaturia. He was discharged on the 27th of October.

Fistula in Perineo.—One case remained from last return, one, was subsequently received, one, was discharged cured, and one, was invalided.

Retention of Urine.—One case of this disease was received, and was discharged cured. He was only four days under treatment.

Gonorrhœa.—Two cases remained from last return, 104 were subsequently received, ninety-seven, were discharged cured, one, was invalided, and eight, remain under treatment. The case invalided was admitted for gonorrhœa, and was found to suffer from functional disease of heart, for which disease he was invalided.

Spermatorrhœa.—One case was received, and, was discharged cured. He was twenty-two days under treatment.

Stricture.—Nine cases were received, seven were discharged cured, one was invalided, and one remains under treatment. The case invalided was admitted for stricture, which was cured, but the man was found to suffer from deafness of right ear, for which disease he was invalided on the 6th of December.

Varicocele.—One case was received and was discharged after having been 117 days under treatment, with almost complete obliteration of the enlarged veins.

Orchitis.—One case remained from last return, and thirty-four were subsequently received. They were almost, without exception, of a traumatic origin, and were all discharged cured.

Hydrocele.—Of the four cases admitted, three were discharged cured, one, after the operation, and injection of tincture of iodine, and two, after simple puncture

Appendix.

puncture of the tunica vaginalis. The case invalided was one of hydrocele of the spermatic cord, with considerable weakness of the abdominal ring, the tumour disappearing into the abdomen on pressure, where it was easily retained by a truss.

DISEASES OF THE ORGANS OF LOCOMOTION.

Diseases of the Bones.—Two cases remained from last return, seven, were subsequently received, six, were discharged cured, and three, invalided.

Diseases of the Joints.—One case remained, eight, were admitted, five, were discharged cured, and four were invalided.

Diseases of the Bursae.—Two cases were received, one was discharged cured, and one was invalided.

XII. & XIII. DISEASES OF THE CELLULAR TISSUE AND CUTANEOUS SYSTEM.

Phlegmon and Abscess.—Seven cases remained from last return, sixty were received since, sixty-four were discharged to duty, one was invalided, and two remain under treatment.

Ulcer.—Six cases remained from last return, forty-five were subsequently received, forty-three were discharged cured, four were invalided, and four remain under treatment. In one case invalided, the ulcer was situated on upper lip, and indurated. In another, the ulcer was situated on right leg and connected with varicose veins. In another, there was partial ankylosis at ankle joint from agglutination of tendons. In the fourth case invalided, the ulcer was connected with syphilitic disease.

Eczema.—Five cases were received, four were discharged cured, and one was invalided. This case was one of inveterate eczema, affecting principally the face and scalp. He was under treatment, in hospital, 200 days.

Tumour.—Three cases were received, and were discharged cured. One case was enlargement of thyroid body; another case, that of a fibro-plastic tumour, situated over deltoid muscle. The third case was found to be an encysted collection of pus on right side of face.

Clavus.—One case was received, and discharged cured after four days' treatment.

Scabies.—Eighteen cases were received, and were cured after an average of thirteen days' hospital treatment.

Lepra.—One case was received, and was discharged cured. It was only a trivial case, and only fourteen days under treatment.

Psoriasis.—Three cases were received, and were discharged cured. They were only of a trivial nature, and averaged seventeen days in hospital.

WOUNDS AND INJURIES.

Wounds.—Two cases remained from last return, forty-one were subsequently received, forty-one were discharged cured, one was invalided, and one remains under treatment.

Fractures.—Three cases remained from last return, eighteen were subsequently received, sixteen were discharged cured, three were invalided, one died, and one remains under treatment.

Dislocations.—One case was received, and was discharged cured. This was a dislocation of thumb and was retained in hospital eleven days.

Sprains.—Two cases remained from last return; thirty-one were subsequently received, and thirty-three were discharged cured; there were no cases deserving comment; the average number of days they were under treatment was twenty-two.

Contusions.—Two cases remained from last return, fifty-six were subsequently received, fifty-two were discharged cured, two were invalided and four remain under treatment.

Burn

Burns and Scalds.—Thirteen cases were received, six were discharged cured, and three are returned dead. Seven cases were admitted from Her Majesty's dockyard at Sheerness on 4th November suffering from scalds caused by the bursting of one of the boilers of Her Majesty's ship *Thistle*. The injuries chiefly consisted of severe scalds with large vesications, situated principally on the head, face, forearm as high as the elbows, and hands. The lower extremities were uninjured. It was noticed that those who had the most hair about the face were the least severely injured in that part, the hair affording great protection from the power of the steam. Two of the patients appear to have inhaled some of the escaping steam as for several days they complained of sore throat, dyspnoea, difficulty of swallowing, accompanied by bronchitis. Extensive supuration ensued in all the cases, the discharge being very profuse and exhausting. The various scalded parts were treated with the carron oil mixed with carbolic acid, morphia was given to allay pain, beef tea, milk, and wine were given for diet. Two of the patients became delirious for two or three days, with intervals of consciousness. In one case, arterial bleeding took place from external ear, from ulceration laying open a small branch of the auricular artery. In another case, abscesses formed on scalp, lower jaw, axillæ, and the glands of neck became swollen and painful. In some of the patients after cicatrization had taken place, the integuments of hands and fingers were much contracted by the cicatrices of the injured parts, so that perfect flexion and extension of the fingers were impaired. In two of the cases complete alopecia ensued from destructive ulceration and sloughing of the scalp. Three of these cases were discharged to duty and four remain under treatment. The three fatal cases returned were brought dead from Her Majesty's ship *Thistle*.

Concussion of Brain.—Seven cases were received into hospital during the year, of whom four were discharged cured, two were invalided, and one died. A case of concussion occurred in a leading man of shipwrights from Her Majesty's Dockyard at Chatham, admitted on the 23rd November; symptoms of compression supervened, and the patient expired on the 25th.

Poisoning.—A case of poisoning occurred in a Marine, at headquarters, who wilfully drank some chloroform liniment which was being used by one of his messmates. When admitted he was comatose and almost pulseless. Upon the application of galvanism for a quarter of an hour he recovered.

A LIST of OPERATIONS performed at the ROYAL NAVAL HOSPITAL, CHATHAM,
between the 1st January and the 31st December 1869.

Date of Admission.	Cases.	Age.	Quality.	Disease or Injury.	Nature of Operation.	Result.
1869 : 24 March -	Case 1	49	Dockyard Labourer.	Caries of radius, ulna and carpal bones, following erysipelas.	Amputation at middle of upper arm, by anterior and posterior flaps.	Death from bronchitis, ten days after operation.
11 March -	Case 2	25	Corporal, a.m.	Carcinoma of lower lip -	Removed by V-shaped incision.	Recovery; invalided for deformity and cachexia.
6 August	Case 3	22	A. B. -	Anchylosis of second and third phalanges of fourth finger of right hand, with exostosis.	Amputation of second and third phalanges of fourth finger of right hand.	Recovery.
17 August	Case 4	51	Dockyard Labourer.	Wound of hand by circular saw dividing metacarpal bone of little finger, and superficial and deep palmar arch.	Amputation of metacarpal bone of little finger.	Recovery.
9 June -	Case 5	35	Dockyard Labourer.	Lacerated wound of fingers and hand by screwing machine.	Amputation of middle and ring fingers.	Recovery.

MEDICAL AND SURGICAL REPORT
OF
H A U L B O W L I N E H O S P I T A L,
FOR THE YEAR 1869,
BY
STAFF SURGEON JOHN WATT REID, M.D.

Appendix.

MEDICAL REPORT

OF

HAULBOWLINE HOSPITAL,

For the Year 1869,

By Staff Surgeon JOHN WATT REID, M.D.

THE total number of admissions was considerably less than in the preceding year. The daily average of patients during 1868 was 39.1, whereas during the year under review, it was only 27.4. This was in part to be attributed to the reduction of the force on the station, especially to the withdrawal of a battalion of Marines that had been stationed during the first six months of 1868, on the islands and in the forts in this harbour.

The great majority of cases were admitted from the Mersey and Valiant, and their tenders, and from the Scorpion. The remainder came from a few ships of the Channel Squadron at the Admiralty visit in September, from the New Docks, the Coastguard Stations, &c.

The total force on the station averaged 1,500.

The ratio of invaliding was high, being 19 per cent., principally in consequence of the number of cases of phthisis and insanity.

No case of any of the principal eruptive fevers was admitted during the year.

GENERAL DISEASES, SECTION A.

Enteric Fever.—Four cases, returned as enteric or typhoid fever, remained under treatment from the previous year. Four were admitted in January and February from the Mersey and the Orwell. All the attacks were mild and amenable to treatment. There was more or less looseness of the bowels with tympanites, gurgling in the right iliac fossa, &c.; but there is no record of the appearance of the usual characteristic rash in any of the cases.

Continued Fever.—Two men and a boy were admitted with continued fever. The former were respectively seventy and sixty-three days in hospital.

GENERAL DISEASES, SECTION B.

Rheumatism.—Two cases of rheumatism remained from the preceding year. thirteen were admitted. Of the total number, twelve were discharged cured, one was invalided, and two remained under treatment. Four cases of the acute form of the disease occurred, without cardiac complication in any instance. They were treated with large doses of the alkalies and their salts. Of the chronic form one was an attack of sciatica; the others were cases of lumbago, pleurodynia, &c. The man, who was invalided, was of a highly strumous constitution.

Scrofula.—One case of scrofula remained from the preceding year; one was admitted. Both were invalided. In the first, troublesome suppuration took place in the right breast. There was also chronic swelling, with induration, in the neighbourhood of the left mamilla. The glands of the neck suppurated extensively in the other case.

Phthisis.—Six cases of phthisis remained under treatment at the beginning of the year; and thirteen cases were admitted. Of the total number, one man returned

returned to duty; an officer's servant was discharged, at his own request relieved; and two officers went out on sick leave: eight cases were invalided, three died, and four remained in hospital. Both lungs were generally affected in eight instances; in eight, the principal seat of disease was in the right lung; in three, in the left. All were cases of chronic phthisis.

Hæmoptysis.—Four cases of hæmoptysis were admitted during the year. All were discharged cured. In two instances the hæmoptysis was probably symptomatic of incipient phthisis; in a third, it was apparently due to some impediment, to the free return of the blood to the lungs, on the left side of the heart. In the fourth case, the hæmorrhage occurred to a man who subsequently was under treatment, and was invalided for diabetes.

Diabetes.—As has just been stated, a man, who had previously suffered from hæmoptysis, came under treatment, and was invalided for diabetes (glucosuria). The presence of sugar was ascertained by Trommer's test. The quantity of urine that was passed in twenty-four hours ranged between 130 and 181 ounces. The sp. gr. was usually 1030, partly owing to an excess of urea.

DISEASES OF THE NERVOUS SYSTEM.

Apoplexy.—One case appears under the head of simple congestive apoplexy.

Paralysis.—A case of progressive paralysis terminated fatally.

Epilepsy.—Two cases of epilepsy were admitted, and both were invalided. It appears that the disease existed in each instance before entry into the service. In one, it was attributed to a severe contused wound of the scalp, accidentally inflicted by a chain while the boy was employed as a farm servant. Before the accession of the fits in the service, he had at different times felt much headache and giddiness; but to avoid going on the sick-list, had never gone to the sick bay. Bromide of potash, in ten grain doses, aperients, the ammoniated tincture of valerian, &c., were given.

Insanity.—One case of melancholia remained from the preceding year, four were admitted.

DISEASES OF THE CIRCULATORY SYSTEM.

Palpitation.—Two cases of palpitation remained from the preceding year; eight cases were admitted. Of the total number six were discharged to duty, three were invalided, and one remained under treatment. In one case the affection was considered to be the effect of gun-drill; in two cases it apparently was the effect of debauchery and consequent derangement of the stomach; in another it seemed to follow the immoderate use of tobacco; and in a fifth case it was considered to be dependent upon self-abuse. The treatment, generally, consisted in the administration of alteratives, bitter infusions, iron, digitalis, &c., and blisters, sedative plasters, &c. were applied.

Valvular Disease of Heart.—One case of organic disease of the heart was admitted, and remained under treatment; the aortic valves were affected. The man had suffered much from secondary syphilis, nodes, rheumatic pains, &c.

DISEASES OF THE RESPIRATORY SYSTEM.

Pleuritis.—One case of case of chronic pleuritis remained from the previous year; an acute case was admitted. The former was invalided; the latter returned to duty. Effusion existed in both cases, but in the latter instance it was readily absorbed. A few doses of calomel and opium were given, followed by diuretics, iodide of potassium, &c., large hot poultices, blisters, tincture of iodine, &c., were applied.

Appendix.

DISEASES OF THE DIGESTIVE SYSTEM.

Cynanche.—Two rather obstinate cases of *cynanche tonsillaris* were under treatment during the year.

Dyspepsia.—Seven cases of dyspepsia were admitted, and were discharged cured. They presented no features of special interest; but, as is usual in such cases, were a considerable time under treatment.

Dysentery.—One case of dysentery was admitted, and was invalided. The disease was said to have been originally contracted in China, seven years before. Small doses of ipecacuan with opium were given with partial benefit.

Diarrhœa.—Two cases of diarrhœa were admitted. One man, who had been invalided for dysentery from China two years previously, was discharged to duty; the other case remained under treatment. In the latter case there seems to have been a taint of scurvy.

Hepatitis.—A chronic case of hepatitis was admitted, and returned to duty. The man had been twice invalided for dysentery, contracted in China. In the early part of the treatment "there was pain in the right hypochondriac region, but no marked extension of the area of the hepatic dullness." The bowels were constipated. An occasional aperient, nitro-muriatic acid, &c., were given, and the diet was carefully regulated.

DISEASES OF THE CELLULAR TISSUE, &c.

Impetigo, Acne, Scabies.—Three cases of *impetigo sparsa*, one of simple *acne*, and four of *scabies*, were admitted. They call for no remark.

UNCLASSED.

Delirium Tremens.—Two cases, returned under the head of *delirium tremens*, were admitted. They were very mild, required little treatment, and soon returned to duty.

Besides these, a military officer, who was *en route* to India in the *Serapis*, was under treatment for a similar slight attack, from the 27th September to the 4th October.

TABLE showing the Number of Cases of different Forms of Disease, and of Wounds and Injuries, admitted into the Surgical Wards, with their Results, &c.

DISEASE OR INJURY.	Remaining on the 1st January 1869.	Admitted.	Discharged Cured.	Invalided.	Dead.	Remaining on the 31st December 1869.	Number of Days' Sickness in Hospital.	Average Number of Men Sick Daily in Hospital.	Average Duration of Treatment in Hospital.
Erysipelas - - - -	-	3	2	1	-	-	229	·6	76·3
Syphilis, Primary - - -	-	12	12	-	-	-	828	2·2	69
„ Secondary - - - -	2	16	14	3	-	1	1,282	3·5	71·2
Ophthalmia - - - -	-	5	1	2	-	2	277	·7	55·4
Myopia - - - -	-	1	-	1	-	-	40	·1	40
Diseases of the Ear - -	-	1	-	1	-	-	52	·1	52
Varicose Veins - - - -	-	1	1	-	-	-	47	·1	47
Bubo (<i>Symp.</i>) - - - -	-	1	1	-	-	-	36	-	36
Hæmorrhoids - - - -	1	-	1	-	-	-	5	-	5
Gonorrhœa - - - -	-	9	8	-	-	1	328	·8	36·4
Stricture - - - -	1	7	7	-	-	1	272	·7	34
Orchitis - - - -	-	1	1	-	-	-	40	·1	40
Diseases of the Bones - -	-	3	2	-	-	1	158	·4	52·6
Diseases of the Joints - -	-	1	1	-	-	-	29	-	29
Phlegmon and Abscess - -	-	4	3	1	-	-	196	·5	49
Ulcer - - - -	1	7	4	2	-	2	489	1·3	61·1
Fistula in Ano - - - -	-	1	1	-	-	-	88	·2	88
Wounds - - - -	3	7	8	-	-	2	385	1	38·5
Fractures - - - -	2	7	5	3	1	-	927	2·5	103
Dislocations - - - -	-	2	-	-	-	2	202	·5	101
Sprains - - - -	-	1	1	-	-	-	44	·1	44
Contusions - - - -	-	3	3	-	-	-	110	·3	36·6
TOTALS - - - -	10	93	76	14	1	12	6,064	16·5	

SURGICAL REPORT

OF

HAULBOWLINE HOSPITAL.

GENERAL DISEASES (Sect. A).

Erysipelas.—Three cases of erysipelas were admitted. One was invalided; the others were discharged cured. Chronic rheumatism existed in the former case. Two presented the phlegmonous form of the disease in the legs, and required free incisions. Both attacks occurred in men of broken constitution. Iron was given internally, with wine, nourishing diet, &c. In the third case the disease, apparently, was dependent upon the formation of abscesses inside the nares.

GENERAL DISEASES (Sect. B).

Syphilis, Primary.—Twelve cases of primary syphilis were admitted during the year. All were discharged cured. Eight cases were contracted in the neighbourhood and two in English ports. In other two cases, the disease was also probably contracted in England. Hard chancres existed in four instances. Buboec suppurated in two cases of soft chancres. Mercury was carefully given, as a general rule; no case was salivated. Afterwards iodide of potassium in sarsaparilla was given, in ten-grain doses.

Syphilis, Secondary.—Two cases of secondary syphilis remained from the previous year; sixteen were admitted. Of the whole number, fourteen were discharged cured, three were invalided, and one remained under treatment. The primary disease had been contracted, in four instances, in Irish ports; in two instances, in England; and in ten cases it is not stated where. The most common symptoms were copper-coloured eruptions, condylomata, sore throat, and pains in the long bones. Mercury, either in the form of bichloride or the green iodide, iodide of potash, iron, nitro-muriatic acid, &c. were given; the diet was liberal; baths were frequently ordered.

DISEASES OF THE NERVOUS SYSTEM.

Ophthalmia.—Five cases of ophthalmia were admitted, of which one was cured, two were invalided, and two remained under treatment. There was, generally, chronic conjunctival inflammation; in one case there was an old ulcer on the cornea; in another the cornea was much thickened, with a good deal of opacity. The iris, also, was irregular, and contracted in one instance from previous disease.

Myopia.—One case, returned under the head of myopia, was admitted, and invalided.

Diseases of the Ears.—In the only case of disease of the ears that was admitted and invalided, chronic otorrhoea, with deafness, existed. The man was of a highly strumous constitution.

DISEASES OF THE CIRCULATORY SYSTEM.

Varicose Veins.—One case of varicose veins, in a seaman who had been previously invalided for the same disease from the South East Coast of America, was admitted. The long saphenous vein was ligatured; and the man was discharged cured.

DISEASES OF THE ABSORBENT SYSTEM, &c.

Bubo (Symp.).—One case of sympathetic bubo was admitted, and discharged cured. With regard to the treatment in this case the following remarks appear in the Case Book:—"This case is recorded simply to show the advantage of

of simple puncturing in a depending part, as compared with the practice of free incision. This patient might safely have returned to his duty on the eighth day after the puncture, whereas a complete incision would certainly have detained him a month or six weeks, if not longer."

DISEASES OF THE DIGESTIVE SYSTEM.

Hæmorrhoids.—One case of hæmorrhoids, requiring only rest and attention to the bowels, was a short time under treatment.

DISEASES OF THE URINARY AND GENERATIVE SYSTEM.

Gonorrhœa.—Nine cases of gonorrhœa were admitted; in eight instances attended with orchitis. Five were acknowledged to have been, and the remainder in all probability were, contracted either at this port or at Cork.

Stricture.—One case of stricture remained from the previous year; seven cases were admitted. Of the total number seven were discharged cured, and one remained under treatment. They all were permanent, and were treated by bougies, in the usual way. Only one was obstinate.

Orchitis.—A case of orchitis, consequent upon a blow, was admitted, and discharged cured.

DISEASES OF THE ORGANS OF LOCOMOTION.

Three cases of diseases of the bones were admitted. Of these, two were cured, and one remained under treatment.

Necrosis.—Necrosis of a small portion of the lower jaw, consequent upon the presence of decayed teeth, existed in two instances. A small sequestrum was removed in each case, the teeth were extracted, and a cure speedily followed.

Exostosis.—The remaining case was one of exostosis of the right humerus, and was probably of syphilitic origin. It was successfully treated with the application of mercurial ointment, and the administration of iodide of potash, &c.

Synovitis.—Chronic Synovitis existed in the case that was admitted as one of disease of the joints. It was consequent upon a blow. Tincture of iodine, blisters, &c. were applied.

DISEASES OF THE CELLULAR TISSUE, &c.

Abscess.—Four cases of abscess were admitted, of which three were discharged cured and one was invalided. In the latter case the individual was of a weak strumous constitution.

Ulcer.—One case of ulcer remained from the year before; seven cases were admitted. Four were discharged cured, two were invalided, and two remained under treatment. Three were dependent upon varicose veins; the others were the result of accident at duty on board ship. Of the former, two were invalided and one was cured by operation.

Fistula in Ano.—One case of fistula in ano (blind external) was admitted, and was cured by operation.

WOUNDS AND INJURIES.

Wounds.—Three cases of wounds remained from the previous year, and were discharged cured. One, that was situated in the front of the left fore-arm, had been inflicted by a blunt hook. A good deal of deep-seated suppuration took place. In another case a large piece of the upper lip had been bitten out by a drunken messmate. In both of these a good cure was effected. The third was an extensive laceration of the forehead, from a fall on shore. Seven cases were admitted during the year, of which five were discharged cured and two remained under treatment. One was the loss of the right hand and part of the bones of the fore-arm, received in firing a salute, and two were inflicted by axes; all necessitated operation. Another was caused by a waggon passing over the fore part of the right foot; one was a laceration of the right hand, from a chain on board ship; the others were an accidental incised wound and an abrasion received when at work. Three of the cases came in from the new works in progress in this yard.

Fractures.

Appendix.

Fractures.—Two cases of fractures remained from the previous year. One was invalided; the other was discharged cured. The former was a compound fracture of the left leg close to the ankle-joint, from a fall. In the latter interesting case, which is detailed in the original report, there was a compound and comminuted fracture of the frontal bone, resulting in complete recovery.

Seven cases were admitted during the year, of which four were discharged to duty, two invalided, and one died. Three came from the new docks. Of those who returned to duty, there was a simple fracture of the right radius and ulna by a capstan bar in one case; of the right acromion from a fall in another; of the first metatarsal bone of the right foot from a stone falling upon it in a third; and comminuted fracture of both bones of the left leg from a fall in the fourth. In those that were invalided, persistent neuralgia, apparently consequent upon fracture of the leg, existed in one case; in the other there was much stiffness of the knee-joint, owing to great disposition of callus, &c. in connection with an oblique fracture of the right femur in the lower third. In the fatal case the man threw himself from a window, while labouring under delirium tremens, and sustained fracture of the seventh cervical vertebra, the spinous process and arch being detached from the body of the bone. He lived until the fifth day; there was complete paralysis with priapism; the use of the catheter was constantly required; the bowels were opened by enemata, &c.

Dislocation.—Two cases of dislocation were admitted, and remained under treatment at the end of the year. One was an old injury of the right shoulder-joint; the displacement had occurred twice; there was great weakness of the arm, with inability for duty. The other was a compound dislocation of the right ankle-joint. "The outer malleolus was struck with great force by the heel of the jib-boom, which was being rigged in at the time. The peroneal tendons were torn across, and protruded through the wound over the malleolus, from which the synovial fluid freely escaped." A good deal of inflammation ensued, and several abscesses formed, but the case was doing well at the end of the year.

Sprain.—One case of sprain was admitted. The left ankle-joint was the seat of injury. The man returned to duty.

Contusions.—Three cases of contusions, two of which were from the new docks, were admitted, and were discharged cured. They require no remark.

TABULAR STATEMENT of the different SURGICAL OPERATIONS performed in the ROYAL NAVAL HOSPITAL, HAULBOWLINE, 1869.

Disease or Injury.	Nature of Operation.	Result.
Wound of right forearm (hand carried away in firing a salute).	Amputation below elbow-joint.	Invalided.
Wound of distal joint of left fore-finger from axe.	Amputation - - -	Cured.
Wound of left foot from axe -	Amputation of third toe	Labourer in yard; removed by his friends.
Fistula in ano - - -	Incision - - -	Cured.
Varicose veins - - -	Obliteration by needles and ligatures.	Cured.
Ditto - - - -	Ditto - - - -	Cured.

ANNUAL REPORT FOR 1869,
OF THE
ROYAL NAVAL LUNATIC ASYLUM
AT
GREAT YARMOUTH,
BY
DEPUTY INSPECTOR GENERAL WILLIAM MACLEOD, M.D.

TABLE I.

SHOWING the Number of PATIENTS in the ASYLUM on the 1st of January 1869; also those Admitted, Discharged, and Died, with their MENTAL DISEASES.

DISEASES.	Remaining in Asylum, 1st January 1869.	Received during 1869.	Discharged Cured in 1869.	Discharged Relieved in 1869.	Discharged Dead in 1869.	Remaining 31st Dec. 1869.
Acute mania - - - -	3	7	3	- -	6	7
Chronic mania - - - -	93	4	4	- -	-	87
Periodic mania - - - -	9	- -	1	- -	-	8
Melancholia - - - -	22	8	5	1	1	23
Dementia - - - -	57	16	4	-	15	54
TOTALS - - -	184	35	17	1	22	179

TABLE II.

SHOWING the Numbers in Hospital on the 1st of January 1869, with the ADMISSIONS, DISCHARGES, and DEATHS during the Year, arranged according to their Mental Diseases and Rank in the Service, and the Numbers remaining on the 31st December 1869.

DISEASES.	In Hospital, 1st January 1869.							Admitted during the Year.						
	Officers.	Seamen.	Stokers.	Coastguard Men.	Boys.	Marines.	Pensioners.	Officers.	Seamen.	Stokers.	Coastguard Men.	Boys.	Marines.	Pensioners.
Active mania - - - -	2	-	-	-	-	-	1	2	3	-	-	1	1	-
Passive mania - - - -	6	41	5	1	-	26	12	1	2	-	-	-	-	4
Periodic mania - - - -	6	2	-	-	-	1	1	2	2	-	-	-	-	-
Melancholia - - - -	6	6	1	1	-	5	2	2	2	-	-	-	1	3
Dementia - - - -	13	11	1	4	4	15	9	2	2	1	1	-	4	6
TOTALS - - -	31	60	7	6	4	47	26	7	9	1	1	1	6	10

DISEASES.	Discharged during the Year.							Died during the Year.							Remaining 31st December 1869.						
	Officers.	Seamen.	Stokers.	Coastguard Men.	Boys.	Marines.	Pensioners.	Officers.	Seamen.	Stokers.	Coastguard Men.	Boys.	Marines.	Pensioners.	Officers.	Seamen.	Stokers.	Coastguard Men.	Boys.	Marines.	Pensioners.
Active mania - - - -	2	-	-	-	-	-	1	-	-	-	-	-	-	-	2	3	-	-	-	1	1
Passive mania - - - -	1	1	-	-	-	-	4	-	-	-	-	-	-	-	8	37	5	-	-	24	13
Periodic mania - - - -	1	1	-	-	-	-	1	-	-	-	-	-	-	-	4	2	-	-	-	1	1
Melancholia - - - -	1	1	1	1	1	6	1	-	-	-	-	-	-	-	6	6	1	1	1	4	5
Dementia - - - -	1	1	1	1	1	4	3	2	1	-	-	-	-	-	12	10	1	5	3	15	8
TOTALS - - -	6	5	-	1	3	18	3	3	6	1	-	-	5	7	32	32	68	7	7	3	45

Appendix.

ANNUAL REPORT FOR 1869,
OF THE
ROYAL NAVAL LUNATIC ASYLUM
AT
GREAT YARMOUTH,

By Deputy Inspector General WILLIAM MACLEOD, M.D.

Site of hospital. THE Royal Naval Lunatic Asylum at Great Yarmouth is entirely separate from the town and lies to the south of it. It is situated on a neck of land, called the South Denes, commanding a fine view of the sea on the east and the River Yare on the west.

All the ground between the hospital buildings and the esplanade on the east has been purchased by the Admiralty, and is now enclosed by a stone wall surmounted by substantial iron railings, so that no more building can from henceforth intercept the sea view. This inclosure, which consists altogether of ten acres of land, is meant for recreation grounds, where the patients can indulge in such games and amusements as may be considered desirable.

**When built.
How occupied,
and by whom.**

The hospital was built in 1809, for the accommodation of the sick and wounded of the North Sea Fleet, and for a short period it was occupied. After the termination of the war in 1815 it was lent to the military, in whose hands it remained until the Russian War, when it was fitted up as a naval hospital, and after the Peace it was a second time given to the military.

**Finally taken
possession of by
the Admiralty.**

In 1863, the Admiralty authorities, finding that the lunatic patients were increasing, and the accommodation at Haslar Hospital not being sufficient for the sane and insane, as several of the patients, to the number of 40, had to be boarded at Hayward's Heath, Sussex Asylum, it was decided to remove the lunatic patients to Yarmouth.

**Alterations
made in the
building, and
which are still
going on.**

Great changes have, since 1863, taken place in the arrangements of the building, in order to make it efficient as a lunatic asylum, and the alterations are still going on. The following are the principal alterations already effected, viz., airing grounds and airing sheds for the officers and men; improved drainage in the removal of twenty-seven cesspools; building new water-closets with cross ventilation between the seats and the main building, as shown in the plan; the laying down of water-pipes and the introduction of water by the Water Company of Great Yarmouth, instead of having to pump up water daily from wells in the quadrangle, into which I have no doubt organic filth found its way; relaying all the gaspipes, as the supply was found insufficient; dividing certain of the large sleeping wards into sleeping cabins, for the restless and roving-about patients; fitting up padded cabins; a general bathroom, with eight baths, where all the patients are bathed weekly or as often as it is necessary; old bathrooms being converted into reception-rooms; messrooms fitted up for the different grades of officers; billiard and reading room for the commissioned officers, and recreation and reading-room for the seaman and Marines; a deadhouse separate from the main building.

The building consists of four blocks, occupying the four sides of a quadrangle, each being 260 feet long, the general style adopted being the Roman Doric.

The

The blocks are connected at the angles by a screen wall about fourteen feet high, behind this are small yards, leading to the several airing grounds, in which are placed water-closets and urinals.

On the Admiralty taking possession of the building in 1863, the closets in the entrance halls on each floor were reconstructed; but it was found impossible to prevent effluvia pervading the halls and adjacent dormitories. Soon after I took charge of the hospital, in 1866, I recommended that the inside water-closets should be done away with gradually, and after consulting the clerk of works, the present new water-closet arrangement was submitted to the authorities, which they are carrying out. The closets and urinals are placed in annexes built out from the building, from which, however, they are detached by a space about four feet wide, open at each side, so as to cause a thorough current of air passing between the closets and the building. This plan has been found very effective, and the wards in those houses where it has been adopted, and also the halls and staircases, are now quite free from any unpleasant smell. The above plan is believed to be peculiar to this hospital, and is strongly recommended for adoption elsewhere.

The angles of the quadrangle are open from the height of the first floor, thus securing a good and sufficient ventilation to the inclosure. A covered communication has been made between two of the blocks, for the better protection of the officer patients in passing from their sleeping cabins to their day wards. It has also been found a great convenience for the medical officers and attendants, especially at night. This passage as well as the staircases and the passages leading to the sleeping cabins are warmed during the winter months with a system of hot-water pipes. The wards are lofty, well lighted, and ventilated by windows on each side, and are also ventilated by an improved self-acting ventilating valve concealed from view in the thickness of the walls, and well protected from improper interference on the part of the patients; the result being, that the wards are as sweet on being opened in the morning as when first closed for the night. The drainage is good and efficient, acting by gravitation, being occasionally flushed during the long drought of summer.

The building is capable of accommodating forty-five officers and 200 seamen and Marines, on the principle that double accommodation is provided for all, that is, that no patient lives by day where he sleeps by night.

For further particulars regarding accommodation provided for all classes of officers, seamen, and Marines, I must refer the reader to the report published in the Appendix to "The Health of the Navy" for 1866.

Appended to this report will be found a general plan of the building kindly made by the clerk of works in charge of the buildings.

The thirty-four officers have been resident in the asylum from periods varying from forty-five years to one month, as follows: one, for forty-five years; one, for forty years; one, for thirty-four years; one, for twenty-three years; one, for seventeen; two, for twelve; two, for ten; two, for nine; two, for seven; two, for five; two, for four; three, for two; seven, for one, and seven, for periods varying from ten months to one month.

Six men have been resident from thirty to forty years; twelve, from twenty to thirty years; twenty-nine, from ten to twenty years; thirty-six, from five to ten years; sixty-seven, from under one year to five years.

Taking the whole naval service for 1869 at 82,000, and deducting the number of patients in the asylum who do not belong to the naval service proper (five in number), it will be found that there was in the asylum during that year:—

- 1 Lunatic officer to every 271 sane officers in the service.
- 1 Lunatic seaman to every 447 sane seamen in the service.
- 1 Lunatic Marine to every 285 sane Marines in the service.
- 1 Lunatic pensioner to every 584 sane pensioners in the service.
- 1 Lunatic Coastguard man to every 1,130 sane Coastguard men in the service.
- 1 Lunatic boy to every 1,750 sane boys in the service.

Taking all classes, one to every 471 in the service.
384.

Appendix.

Accommodation in the building at present.

For further information, consult Appendix, Health of the Navy, 1866.

Time the officers have been resident in the asylum.

Time seamen and marines, &c., have been resident.

Proportion of insane to total naval population.

The

Comparison between number of insane in Navy, and corresponding number of individuals ashore. The question may here be asked, whether the proportion of insane to sane is greater in the naval service than in the same number of individuals taken from the corresponding social position ashore. In the year 1869 the proportion of the total number of lunatics to the whole sane population was one lunatic to 411.

Officers and men divided into two classes, those with delusions, and those without.

Officers and men may be summarily divided into two classes, in accordance with their mental symptoms ; first, those with delusions, and second, those without delusions. Amongst the officers there are twenty of the former, and of the latter, fourteen. Amongst the seamen, Marines, &c., there are 100 with various delusions, and fifty without delusions.

Patients who come with delusions.

It is common to find patients on their first entry, with extravagant delusions, and a few months afterwards the stage of delusion has completely passed away, and they either get well or they become demented ; so that in those who do not recover, dementia may be considered a more advanced stage of the disease. When the diseased action arrives at dementia, it becomes in many cases suspended, and the patient may live for many years ; the degeneration having only proceeded to obliterate the functions of the primary nerve centres, or the grey portion of the hemispheres, the seat of intelligence, memory, and formation of ideas. Very often in these cases, where there is simple dementia, the whole mischief or cause of insanity is not to be found dependent so much on actual organic disease in the brain proper, but on thickening of the membranes, and effusion of serum between the convolutions, the nerve cells themselves being for the time untouched by disease, but ultimately degeneration of the cells takes place, in consequence of the pressure of the effused serum.

Cause of the change.

Then comes the question,—What gives rise to the escape of serum from the bloodvessels ? Is the fault in the coats of the vessels ; in the loss of nerve influence, which regulates the contraction or relaxation of the vessels ? or are the natural constituents of the blood out of proportion ? I am of opinion that it is dependent on loss of nerve influence over the vessels, as well as on a change in the constituents of the blood.

Patients with delusions, more promising than the demented.

A patient with delusions, however absurd they may be, unless of the high and exalted form, is in a much more promising and hopeful state than the individual who has no power of observation, whose memory is defective, and on whom sensations from within and without do not act ; for in the former case there is evidence that some degree of intelligence is left, and that the different nerve centres act and react on each other to a certain extent.

Sufficient pathological facts found after death to account for insanity.

The fourteen officers without delusions are as devoid of intelligence as if, through some potent agency, all trace of mind had been obliterated, and no recovery need be expected.

I have examined, with the assistance of the staff surgeon (during the last five years), the brain and spinal cords of 100 patients, who were for some time previous to death, and at death, labouring under decided symptoms of one form or other of insanity ; and in every instance I have found organic changes more than sufficient to account for the symptoms of insanity, either in the diseased change which took place in the membranes, or on the surface of the convolutions, or between the convolutions, or in the brain proper, or in both. I have not at all times been able to explain some particular symptoms, but I cannot join those who say that in many instances no diseased condition could be discovered to account for the insanity.

Complications of dementia.

In one of the fourteen cases of dementia under treatment in the asylum, the malady is complicated with epilepsy, both of which supervened on metastasis of mumps to the membranes of the brain.

In this case bromide of potassium has reduced the fits from thirty in a month to five, but there is no restoration of mind. In another the dementia is extreme, and is the result of sunstroke, contracted when surveying on the coast of Africa, arising no doubt from effusion of serum, which is being re-absorbed. This patient will probably recover. A third, some years ago, had epileptic fits constantly, these have discontinued ; but now, periodically, he gets attacks of restlessness and excitement, when he becomes very talkative ; this stage lasts from five to ten days, after which he gradually passes into a torpid state, sometimes continuing for months, when he is completely lost to all surrounding objects, requiring to be spoon-fed, and to have everything done for him. This no doubt is a form of epilepsy ; but in such cases bromide of potassium does no good.

11

In several of the above fourteen cases there is slow progressive nerve degeneration going on, as is evidenced by occasional slight attacks of loss of motor power in some part of the body, with rise of temperature.

Appendix.

Twenty of the officers have delusions of different forms: five, labour under delusions of an exalted nature, but not connected with active softening of nerve tissue; five, under delusions of a depressing nature, with suicidal tendency; five, under delusions complicated with symptoms of rapid degeneration of some portion of all the nerve-centres, primary, secondary, and tertiary, commonly known as paralysis of the insane; and five, under illusions of vision and hallucinations of hearing.

Officers with delusions.

Space will not permit me to enter into the pathological facts, in order to explain all these different symptoms.

Before I proceed to deal with the causes of insanity among the officers and seamen, I shall make a few remarks on the present state and condition of the 150 seamen and Marines remaining under treatment on the 1st of January 1869:

Present state and condition of the patients.

- 92 Will at present be found, some of them in a state of extreme dementia without delusions, and the active disease for a time suspended; some labouring under various delusions, and none of them in a fit state to leave the asylum; the demented being so weak-minded as not to be able to take care of themselves, and those with delusions too dangerous to themselves and others. No recovery need be expected.
- 26 Labouring under different stages of general paralysis, and no recovery need be looked for. Five, the results of hurts received in the service.
- 2 Labouring under ataxia with delusions. No recovery can be expected.
- 4 Suffering from phthisical insanity.
- 10 Labouring under dementia, with epilepsy; the result of hurts.
- 16 Convalescent, and will be discharged during the next year.

150

Of the thirty-five patients admitted during the year:

- 18 Are decided cases of general paralysis, two being induced by hurts received in the service.
- 2 Dementia, following blows on the head.
- 1 Labouring under ataxia.
- 2 Dementia and senile decay.
- 1 Phthisical insanity.
- 5 Labouring under extreme dementia; so much so, that no recovery can be expected. Cause unknown.
- 6 Convalescent.

35 Of whom seven were officers, and twenty-eight seamen and Marines.

From the above short statement, it will be evident that there is much progressive organic disease amongst the patients who come here, and such being the case, there will be a large mortality. I have carefully examined the records of each individual man, and find that, in twenty cases, the insanity has resulted from accidents received in the service.

Much organic disease in patients here.

The same remarks already made regarding the officers, as to those who have delusions and those who have not, apply to the men.

The delusions in general are of an exalted or depressing nature. Among the exalted are those who believe themselves to be kings or messengers of God to reclaim the rest of the world. I have seldom met with any of them who imagined himself to be an admiral or superior naval officer, which one should suppose would be the great aim and desire of seamen, and only one Marine have I met with who believed himself to be a general officer.

Similarity of delusions in officers and men.

The delusions and hallucinations which are common among officers and men are exactly of the same character that are common among the insane in civil life. They are generally those which imply infinite possessions, such as immense wealth, noble birth, divine origin, while the depressing delusions are

Nature of delusions.

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of a gloomy semi-religious character, and imply eternal isolation from the world, from friends, and from God himself. It may be said, indeed, that insanity, wherever met with, bears a strong analogy to other physical diseases, for its symptoms are the same in the officer, the seaman, and the marine. I have not found, as might *a priori* be expected, the delusions of the educated man to be different from those of the uneducated. The delusions common in paralysis of the insane, are the same in the officer and seaman. I have at this moment under treatment, three officers and thirty seamen labouring under this incurable disease, and delusions are common to them all, and of the same kind. The ideas of grandeur of the Red Indian would consist in the number of his enemies' scalps he could produce after a fight, and that of a Dyack of Borneo, in the number of human skulls he could hang about his person when dancing his war dance. These subjects would, perchance, form the theme of their delusions if insane, instead of the millions sterling which form the delusions of the civilised European, but they belong to the same exalted form.

Examination
of patients
with a view to
send them to
care of friends.

When examining the different original cases of patients sent here, I compared their past symptoms with their present ones, to enable me to decide whether some of them could be discharged to their friends, on the principle that no sane or insane individual should ever be entirely deprived of liberty, unless for his own protection, or the protection of society. Viewing the matter in this light, I am satisfied that none can be discharged except the sixteen mentioned above, who are at present convalescent. There are one or two who might be placed under the care and protection of friends, if they had friends to care for them and take an interest in their welfare; and experience shows that patients so placed are healthier, and live longer, than the inmates of asylums; but this must arise from their not having progressive organic disease; for the fact of their being able to live outside is a proof that the progress of the disease has been suspended, as there must of necessity be a high mortality wherever there is progressive organic disease of the nerve tissue. None of the patients here labouring under general paralysis could be kept in private families.

Reasons why
uncured.
Patients should
not be dis-
charged.

With reference to the uncured, I have been frequently asked the question—Whether some of them with harmless delusions might not be discharged?

There are, I think, one or two circumstances which ought to be weighed before patients of this class should be discharged. Most of those who come in here, and who in time become harmless and inoffensive, had their insanity induced by long-continued intemperate habits and irregular living.

If these men should resume their old habits they would at once become dangerous members of society; the craving for stimulants is as strong as ever. Another consideration is, that some of these patients have wives and children; and this appears to me a very strong objection against uncured patients being allowed outside, however inoffensive; for if the wives of these insane patients are child-bearing, there is nothing to prevent their having additions to their families, and thus adding to the stock of insanity, poverty, and wretchedness already so rampant. Insanity, throughout the country, is very much increased by the humane and philanthropic ideas of individuals who consider it as a disease of the mind, and not as a physical degeneration of brain and spine similar to disease of any other organ.

The question is seriously asked in medical journals—Should consumptive patients marry? The question may be asked with equal gravity—Should persons who have been insane marry? for the disease is sure to return under the same predisposing causes which first produced it. The question was also discussed in some of the leading journals:—Whether insanity was a disease on account of which clubs should pay the weekly allowance to the families of individuals so afflicted? My attention has been particularly called to this question, as many of the patients who have come here lately are members of such clubs; showing the provident tendency that has grown in the service in comparison to what it was a few years ago. It has been very properly decided that insanity depends on organic disease of the nervous tissue, or of some distant organ sympathetically acting on the brain. Insanity is a true physical disease, and, like some other physical diseases, is hereditary; of this there can be no doubt; it is evidenced by daily facts in this and other asylums, too strong to admit of contradiction.

tradition. In a case that was treated here, the patient, as well as a younger brother confined in another asylum, were born subsequent to their father becoming insane from general paralysis; while the children born previous to the father being so affected, were mentally sound.

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With these facts, why should there be an encouragement given to discharge to their friends persons who are not cured, and who have their animal passions as strong as ever? The cured must be discharged; but when one reflects that persons who have become insane will in most cases transmit to their children their own inherent blemish of brain weakness (and although insanity may not appear in all the offspring, yet it is certain to appear in some), it becomes a grave question whether such persons should be allowed to propagate their like. Another question that arises in connection with the hereditary inheritance is the following:—there are fourteen patients in this asylum who have become insane in consequence of hurts received in the service; will the offspring of such individuals begotten after the diseased action was set up, have the hereditary taint transmitted?

Regarding the individuals who come here, and their friends, I find that unless the patients have a little property or a pension, they are very soon forgotten; but as long as they have this, they are inquired after from time to time. Patients and their relatives.

This seeming neglect may in some instances be accounted for by the fact that many of the inmates left their homes as young men; they came from distant parts of the country, entered on board a man-of-war, in course of time became insane, and many of them never afterwards became rational enough to tell where their friends lived.

I now come to make a few remarks on the causes of insanity in the service; and, did space permit me, I could show that years of war send more inmates to this establishment than years of peace. The chief cause of this is due to the additional number of men employed; but may also arise from insufficient care in the entry of men at a time when their services are urgently required; or it may arise from hereditary taint and consequent want of nerve stability to meet the different requirements necessary for a public service, particularly during a time of war, and this in the majority of cases I believe to be the true cause. Causes of insanity in the service.

In my remarks on delusions, I stated that patients with delusions might soon pass into a state of profound dementia; and, in the same manner, that cases of acute mania might in a few days or weeks, become chronic, or they might become melancholic; while, on the other hand, the depressed and melancholic might become excited and pass into a stage of acute mania; all depending on the physical changes going on within the head, either in the irregularity of the circulations of the brain, spinal cord, or changes in the membranes. No change can, in my opinion, take place in the symptoms without a corresponding change in the tissue.

I shall now state the causes of insanity in the thirty-four officers remaining under treatment on the 1st of January 1869.

- 5 Labouring under degeneration of the nerve tissue, causing general paralysis, there being delusions or dementia according to the stage of the disease.
- 1 Spinal degeneration with delusions, called ataxia.
- 1 Dementia with epilepsy, caused by metastasis of mumps to membranes of the brain.
- 1 Dementia from sunstroke when surveying on the Coast of Africa.
- 1 Dementia following a fall from his hammock.
- 14 Hereditary taint. In three the immediate exciting cause was over stimulation from spirits.
- 7 Dementia following a prolonged course of drinking.
- 4 Cause unknown.

Seven officers were added during the year 1869. In one, insanity arose from senile decay; in one, from intemperance and hereditary taint, followed by hallucinations.

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lucinations of hearing ; in one, from intemperance and hereditary taint ; in one, from hereditary taint and phthisis ; in one, hereditary taint, with melancholia ; in two there was paralysis of the insane.

Patients
admitted since
1866, and
causes.

Since July 1866 there were admitted 129 patients, and the following Table gives the causes, so far as they could be ascertained :—

Paralysis of the insane	-	-	-	-	-	-	-	-	39
Ataxia	-	-	-	-	-	-	-	-	2
Injury to head	-	-	-	-	-	-	-	-	10
Secondary syphilis	-	-	-	-	-	-	-	-	3
Epilepsy	-	-	-	-	-	-	-	-	1
Senile decay	-	-	-	-	-	-	-	-	2
Masturbation	-	-	-	-	-	-	-	-	2
Constipation	-	-	-	-	-	-	-	-	1
Hereditary taint	-	-	-	-	-	-	-	-	28
Intemperance	-	-	-	-	-	-	-	-	20
Unknown	-	-	-	-	-	-	-	-	13
Moral causes	-	-	-	-	-	-	-	-	8
									129

Remarks on
causes.

Five of the cases of general paralysis arose from hurts to the head. Two of the injuries to the head are complicated with epilepsy. One of the cases of secondary syphilis is complicated with epilepsy.

The inference to be drawn from the above list of causes in the officers and men is, that with the exception of dementia resulting from sunstroke, the dementia consequent upon the fall from the hammock, and the cases of insanity arising from injuries to the head, all the other causes mentioned, are to be daily met with in every sphere and social position of life, and are not dependent on causes peculiar to the naval service.

The hereditary taint will, in its own way, and in its own time, induce insanity, whether the individual is on board ship or on shore.

The monotony and unavoidable restraints on board ship have been adduced as causes of insanity in persons possessing the hereditary taint. I believe that if these same persons remained on shore, the anxieties and daily struggle for existence would far outweigh the comparatively minor annoyances of ship life, where in the naval service their wants are liberally supplied, and a certain provision is made for their wives and families, all of which should have a calming and soothing influence ; and so it has for a season. But a time comes when the original hereditary taint will cause a man to break down, much in the same way as tuberculosis of the lungs, or hereditary cancerous affection, or a hereditary disease of the kidneys will do, and to this all classes and individuals in every sphere of society are liable ; no doubt some exciting cause will cast up, and it is the last straw that causes the nerve cell to remain passive to the usual natural stimulus.

Hereditary taint, however, is not the sole cause of insanity. Scrofulous diseases of various kinds, and the action of the syphilitic poison are also liable to engender a tendency to mental diseases. Thus, phthisis may be the prevalent disease in a family during one generation, while in the next generation some members only of the family may be affected with that disease, others becoming insane.

All my inferences are drawn from the family histories of individuals here. Now that more care is taken in the selection and training of boys for the service, and that men are reared in the service, will this diminish insanity ? I fear not, unless great care is taken in tracing back the previous history of the parents and relatives of cadets and boys who are candidates for the public service in the same manner that is done in the insurance offices. A boy may be physically well formed, and apparently have a sound brain at the age of twelve or thirteen, and his family history may be defective. I am of opinion that according to the present selection of boys, a certain class of patients who come here will be diminished in numbers, that is the individuals who come with ordinary delusional insanity,

insanity, and who may remain so or gradually drift into dementia, and then the disease becomes suspended, and who may live to the extreme limit of age allotted for man.

But I do not think that under the present system, the admission of individuals who will break down with decided progressive disease will diminish, and in whom the diseased action does not show itself until after the age of twenty-five, although it may appear as early as twenty-one, and whose average life in the asylum will not extend beyond three years; I refer to those who suffer from paralysis of the insane; the question whether it is increased by the peculiarities of a seafaring life I must delay for a future inquiry. I am inclined, with my present information, to believe that with greater care in the examination of the family history, this disease may be diminished.

Before I finish with the causes of insanity, I must make a few remarks regarding a class of individuals to be met with on board ship and in the Marines, who are constantly under punishment, and whose names figure continually in the defaulters' book. They are day by day before the commanding officer for some petty offence or other, and sometimes for grave crimes, and such a class have several representatives here. They will blame the captain, or senior lieutenant, the master at arms, or the ship's corporal, for driving them by persecution to commit offences for which they are punished, and ultimately they become mad. Some of these find their way to this establishment, some get to Lewes Prison; there they may attempt suicide, or get a step further and become demented, and they are sent here. Men who belong to this class no doubt have a defect, an original one, a want of nerve stability, and they may be punished over and over again, but they will not be reclaimed; they are, in fact, only (as a body) a degree removed from the insane. Would it not be better to get rid of such characters at once. Discipline on board ship, and in the Marine barracks would be improved by their departure, and the public purse would gain by their removal.

Although intemperance, other vices, and moral causes, are acknowledged to be the immediate causes of insanity in several cases, it is very doubtful if it at any time appears without an original instability of nerve power, or hereditary predisposition of it. We often find that two seamen or Marines may enter on a course of hard drinking and debauchery, that one may pass through the ordeal unscathed, while the other breaks down and becomes a dangerous lunatic. Hereditary taint is almost sure to be found in the history of the latter.

Concluding
remarks on
hereditary
taint.

It is worthy of notice that hereditary taint does not prevent a patient from recovery, for as many of this class recover (temporarily, but the disease returns) as of those in whom no hereditary taint can be traced. Several young Marines, are sent here with insanity which appeared to be the result of family affliction. Why is this? Do not we meet with other cases who pass through a great deal more trouble, and yet continue morally and intellectually sound. It is partly at least explicable, on the supposition that in those who break down, a weak brain cell is inherited, which can be shown by reference to relatives who are insane, or have been so. Could the family history of a few thousand individuals be examined into, and this history be classified and detailed according to the characteristics of each, it would be found that one and all had their weak and defective points, and that these were inherited; such as, in some cases, disease of the kidneys, in others disease of the lungs, in others disease of the heart, and in others disease of the brain. A man with a gum-boil, or the irritation of a decayed tooth, will suddenly give evidence of mania, as in one of the cases sent here, and as soon recovered; would such have been the case if the brain formation had not been unsound? His father died in an asylum, and his brother is now in one. Another has enlarged tonsils, and a general inflammatory action of those parts; suddenly symptoms of insanity arise, but as soon as the local disease passes away, the symptoms of insanity vanish. Another who years before contracted syphilis, but who did not give evidence at any previous period of secondary affection, suddenly becomes a raving maniac, and he is sent here. At the time he became insane, a secondary syphilitic eruption appears all over his body, which after a time runs its course, and as the constitutional symptoms disappear, so does the brain affection. Another comes in with symptoms of insanity which

Appendix.

supervened during peritonitis; another with dementia and obstinate constipation; but space fails me or I could illustrate the subject with many cases and details. Although intemperance, domestic affliction, and all other depressing causes, gum-boil, inflamed tonsils, syphilitic eruptions, irregularity of the bowels, and kidneys, give rise to perverted action of the secondary nerve centres, or sensorial ganglia, the real cause is to be sought in the original instability of nerve tissue, and although many of these cases recover, or what is called recovering, yet an impression is left behind which renders the patient more liable to relapse; and, therefore, patients who have been cured, or said to be cured, require to be very careful how they live, if not, the disease is sure to return on the least provocation, and this is what we see take place in all other organs. Let a man have an attack of pneumonia, rheumatism, pericarditis, disease of the kidneys, catarrh of the bladder, stricture, and although cured in the ordinary sense of the word, these organs are become more liable to be affected again by their becoming weaker. It is, therefore, not a matter of surprise that the brain so delicate should come under the same law.

Three coast-guard men, how affected by moral causes.

Coastguard Men.—Three were received this year, and hereditary taint was traced very distinctly in all. One was a case of general paralysis, who died a few months after he came; the other two were discharged cured. The same statement would apply to them both. It would appear that they were found unqualified to act on board ship, and in consequence were surveyed and superannuated.

Both had large families; suddenly they were deprived of their usual means of support, and forced to retire on a pension, probably not amounting to half or a third of their full pay.

When employed they were accustomed to receive their pay simply in consequence of performing a certain amount of physical routine labour demanding but little thought or exercise of the brain.

Their easy means of existence is removed; they have no nerve-power to face the future and plan out additional means of subsistence for themselves and those dependent on them. All is dark and gloomy before them, the sudden shock crushing, and for the time no power of reaction is left; they become full of depressing delusions, even bordering on suicide. This form of melancholia only differs from paralysis in degree, and is dependent on the extent of the diseased action in the nerve-cell. In ordinary language it is said the mind gives way. Is it not the nerve-cell that gives way and refuses to act? The current of ideas has been so contracted and limited for many years that the brain-cell has to be educated in a different sphere of thought.

It could not suddenly accommodate itself to the new state of things. Under rest and treatment they recover, and gradually, after having time to look about them, they are able to extend their thoughts to different subjects. They have friends who are willing to assist them and procure situations where they can double their limited income. They leave here hopeful as to the future, and for a time do well. Let, however, some unforeseen event deprive them of the present support, and they are sure to return. The monotony of the coastguard duty does not seem to affect those employed, in fact it is their safeguard; and had the two men, whose history I give above, been allowed to move in the same locality (instead of being sent to do duty on board ship), like a clock regularly wound up, they would most likely have gone on without breaking down. The hereditary taint found them out.

NOSOLOGICAL RETURN of Lunatic Patients under MEDICAL and SURGICAL TREATMENT in the ROYAL NAVAL LUNATIC ASYLUM at Yarmouth, between the 1st January 1869, and the 31st December 1869.

DISEASES.	Remaining 1st January 1869.	Added during the Year.					Total since added.	Cured.	Dead.	Remaining 31st December 1869.
		Active Mania.	Chronic Mania.	Periodic Mania.	Melancholia.	Dementia.				
II. General Diseases, Section B. :										
Phthisis Pulmonalis - - -	3	-	2	-	-	1	3	-	2	4
III. Diseases of the Nervous System and Organs of the Special Senses:										
Paralysis Insanorum - - -	7	1	4	-	-	11	16	-	15	8
Ataxia Locomotor - - -	1	-	-	-	-	-	-	-	-	1
Keratitis - - -	-	-	1	-	-	-	1	-	-	1
VII. Diseases of the Respiratory System :										
Quinsy - - -	-	-	-	-	-	1	1	1	-	-
Pneumonia - - -	-	-	1	-	-	-	1	1	-	-
Catarrh, Bronchial - - -	-	-	2	-	-	2	4	2	-	2
Chronic Bronchitis - - -	-	-	-	-	-	1	1	-	1	-
XI. Diseases of the Organs of Locomotion :										
Bursal Abscess - - -	-	-	-	-	-	1	1	1	-	-
XII. & XIII. Diseases of the Cellular Tissue and Cutaneous System :										
Abscess - - -	1	-	-	-	-	-	-	1	-	-
Ulcer - - -	2	-	-	-	-	1	1	3	-	-
Psoriasis - - -	-	-	1	-	1	1	3	2	-	1
Unclassed :										
Debility - - -	3	1	1	1	-	4	7	1	4	5
Refusal of Food - - -	-	-	-	-	-	1	1	1	-	-
TOTALS - - -	17	2	12	1	1	24	40	13	22	22

I may state in the way of explanation that this Table only shows the number of patients kept in the sick wards for treatment. It does not show a large number of patients who are daily, and I may say hourly, treated for minor ailments important in themselves, and if neglected lead to grave consequences, but when attended to are of a transitory nature, such as constipation, and of which mention will be made.

What the Nosological Table shows.

Officers and seamen who are sick and requiring to be confined to bed are placed in their respective sick-wards or in their bedrooms, according to circumstances, and they are treated in exactly the same way sane patients would be in any other hospital or private house.

Officers and seamen when sick.

There is this one drawback, that an insane patient seldom or ever will give any correct information about himself ; on the contrary he will mislead. When suffering

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fering from disease of the lungs they seldom have cough, so the medical officer has to trust altogether to physical examination and observations of temperature by thermometer.

Seamen's sick wards.

There are two sick-wards for the seamen with thirteen beds in each. In them are to be found the helpless, demented, paralytics, suicidal, destructive, and all cases requiring medical and surgical treatment, including those who refuse food and who require to be fed with the stomach pump. Most of the individuals are extreme cases and try the patience, tact, and experience of the medical officers and attendants. The rule is, never, under any pretence, to leave a sick patient shut up, by night or day, in a padded cabin unless dangerous to himself or others. I am happy to say that this is rarely required here, as under proper therapeutical treatment, and attention of attendants, the worst cases can be treated in sick-wards. There is a nurse on watch in these wards by day and night, who is never allowed to leave unless relieved.

Remarks on the good effect of medical treatment in noisy patients, who become so suddenly.

I believe, if it were possible to have a correct statement kept of the action of the bowels, and to have them daily regulated in insane patients, much of their sudden and irregular movements might be prevented. It is a daily occurrence, during my rounds, to meet with patients, one refusing his food, a second inclined to strike; a third, depressed, melancholic, and suicidal; a fourth, tearing his clothes and bedding; a fifth, telling me he fought with wild beasts in the night; a sixth, he had been during the night eaten up with ants; a seventh, pale, weak, and inclined to faint, action of the heart impeded by the pressure of the transverse colon from accumulation; an eighth, anxious to destroy the furniture and break all the windows; a ninth, stomach and digestion deranged with acrid bile morbidly reacting on the whole nervous system, walking round the room shaking his fist in his messmate's face, and threatening to strike, which he would do if allowed; a tenth, suddenly becoming perfectly stupid, with loss of memory, and partial paralysis of lower extremities. In all these cases there was an increased temperature as shown by the thermometer. I might mention many more symptoms which are consequent on constipation sympathetically reacting on a brain and spinal cord, already weak and unstable; and that there is a sympathetic action between the abdominal organs and the brain through the sympathetic nerves there can be no doubt. Let a mild purgative be given to one and all of them, and it is extraordinary how soon the most noisy calm down; only manage to watch and humour them until the medicine begins to move the accumulation downwards, and it will be observed that a gradual soothing of the ruffled tempers is taking place. I do not say that matters are so easily accomplished in all instances. This shows that the attendants should, as much as possible, watch the movements of the patients, both in their day wards when at work, and in the airing grounds; and to this constant observation and acting on the information derived, do I in a great measure attribute that no patients required to be placed in seclusion throughout the year 1869.

It is very difficult at times to get demented or melancholic patients to take medicine, partly on account of the disagreeable taste, but frequently because they labour under certain delusions. Calomel can be given in the butter spread on the bread when nothing else can be administered, unless the stomach pump be used, or given by the nostril, or by enema, but enemas at times do not sufficiently act on the small intestine; then it is necessary to get medicine into the stomach.

I must leave further observations on the treatment of violent and destructive patients for another occasion, but I may be allowed to make the passing remark that in all cases of continued violence in the early stages of insanity, whether it be called mania or excitement, it is to be considered as the result of debility, and will be found invariably to have been ushered in by sleepless nights, anxiety, and a general anæmic state of the system, and when I get such a case and I find he refuses food, which is often the case, I feed him at once either by persuasion or force, and it is astonishing how soon a better state of things supervene.

Men come here sometimes reduced to skin and bone, having persistently refused all food for some time previous. One patient, who arrived in March 1869,

1869, was only supported by beef tea enemas for sometime before he travelled to Yarmouth, consequently the first thing I had to do was to feed him with the stomach pump. He was in an extreme state of emaciation. It will be found that as nourishment is thrown into the stomach and is absorbed, so the brain acts, delusions diminish; a regaining of flesh and of intelligence go together, which will be seen from the following facts.

On the 20th October 1869, S., a seaman aged 26, just returned from the East Indies; he was labouring under acute mania, the exciting cause being secondary syphilis.

	<i>Sts.</i>	<i>Lbs.</i>
On the 20th October he weighed - - -	11	-
" 6th November " - - -	11	12
" 21st " " - - -	12	5

As he began to regain in weight so did he calm down and become restored to his right mind.

W., arrived here 22nd December 1869, aged 30, labouring under chronic mania, weighed 11 st.

	<i>Sts.</i>	<i>Lbs.</i>
5th December 1869, weighed - - -	12	13
became calm and reason returned.		
W., 21st October, weighed - - -	9	-
12th December, weighed - - -	10	10

Hallucinations of hearing and delusions; as he gained flesh so the hallucinations and delusions diminished.

H., returned from the Abyssinian Expedition, sent here on the 12th October 1869, suicidal, melancholia, and depressing delusions, with refusal of food.

	<i>Sts.</i>	<i>Lbs.</i>
On arrival weighed - - -	8	3
5th December, weighed - - -	8	10½
29th " - - -	9	5
1st February 1870, weighed - - -	9	13½

Here again, as he regained flesh so the delusions dispersed, and he made a good recovery.

M. a pensioner labouring under melancholia and suicidal mania.

	<i>Sts.</i>	<i>Lbs.</i>
On arrival, 22nd July 1869, weighed - - -	11	11½
5th September " - - -	12	2½

made a good recovery.

S., arrived here 22nd of July, a regular bag of bones, quite emaciated. Water had to be removed by catheter. Supported by enemas before he came.

	<i>Sts.</i>	<i>Lbs.</i>
22nd July, weighed - - -	9	13
3rd September, weighed - - -	10	9

R., a case of general paralysis, aged 40.

	<i>Sts.</i>	<i>Lbs.</i>
4th August 1869, weighed - - -	11	11
Full of exalted delusions, and very rich.		
5th September, improving, weighed - - -	12	2
8th November, destructive, weighed - - -	11	7½
5th December, quiet and improving, weighed - - -	12	2½
28th " " " - - -	12	3½
25th January 1870 " " - - -	12	4

I have no doubt the next time he begins to lose flesh his downward course will be rapid, followed by extreme dementia.

C., a general paralytic, arrived here:—

	<i>Sts.</i>	<i>Lbs.</i>
3rd September 1869, weighed - - -	9	10½
22nd " noisy and restless, weighed - - -	9	-
2nd December, weighed - - -	8	12

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The downward course of this patient was rapid, as he diminished in weight so did his temperature rise. Softening of nerve tissue, waste of flesh, and a high temperature go together.

The foregoing illustrations show that when there is a gain of flesh reason returns, as it holds true in all the recoveries; and with the general paralytics, as they lose motor power and get demented, so there is a waste in proportion, not only of fatty tissue, but of muscle.

General paralytics may increase in weight, but when this is the case it is fatty degeneration; the muscle is diminished.

I shall now make more extended observation on two of the physical diseases commonly met with in the sick wards of this asylum.

Phthisis.—Although it has not been fatal this year, is frequently met with in this asylum, among the melancholic, the demented, and the general paralytics.

Phthisis as it supervenes in patients already insane, and may be properly called phthisical insanity.

Insanity and tubercular disease frequently travel together, and are to be found in the same individual. I am not as yet able to state the proportion of those who die insane and from some other physical disease, in whose lungs tubercles are found. I have known the lungs of patients who died from some other physical form of disease studded with the fine miliary tubercle, who, during life, gave no evidence of it.

In cases of melancholia and dementia, &c., when lung disease supervenes, and eventually is the cause of death, the attention of the medical officer is not at all times called to such cases by the usual symptoms of cough and dyspnoea. It often occurs, and this I think is the characteristic symptom of it, that the first thing to attract attention is the individual becoming unusually stupid, and, if I may use the expression, an extreme degree of torpidity comes on. Let it be remembered, that he is insane either for a short or long period prior to those symptoms appearing; he will begin gradually to get more careless about his dress, refuse his food; should he by chance be left standing in the middle of the ward, there he will remain with his eyes fixed on the floor, until some one takes him by the hand and makes him sit down; when he sits down, or is placed in a bed, no more is heard of him. He gets wet and dirty in his habits. At the time, swelling in the feet and ankles is common, consequent on the patient standing for lengthened periods. There is no kidney disease present. Let a physical examination be made, and little tangible will be found amiss; but the thermometer will show a decided increase of temperature in the evening over the morning, and that the temperature is gradually on the increase both in the morning and evening, with a quick pulse. In a short time consolidation will be found in some places; and, after a time, rales and softening will be distinct. The stupidity and utter state of dementia proceeds, and arrives at its height in proportion to the amount of consolidation. During this state of tubercular deposit and consolidation, in a few rare cases, the patient becomes so torpid, so lost to surrounding objects, sensation becomes so blunted, reflex action so utterly lost, that tickling the soles of the feet, or rubbing the ball of the eyes produce no muscular movement. Food is refused, and it is necessary to feed him by stomach pump. One such patient allowed his mouth to be opened, and the gag introduced and the feeding tube to be passed down without a sign of reflex action until the point of the tube touched the posterior fauces. For four months did this go on. As, however, the softening takes place, and abscesses form in the lung, so the temperature increases—the evening higher than the morning—and as hectic fever shows itself, so in proportion does the cloud begin to be removed from the intellect, and mind is in some degree restored, as if through the expectoration and the profuse sweats a poison was being eliminated from the seat of intelligence, and before death closes the scene sensation becomes acute, reflex action perfect, and at times they are not only conscious of what is going on around them, but their ideas return to home and loved ones, and in their half-expressed thoughts enough is said to show that memory has comparatively regained her seat. I have only given a general and short outline of these cases, sad in themselves, and they become more so towards the end, when there appears as if it were a ray of sunshine, soon again to disappear, after a long and dark dreary

dreary night. These are the cases to which I think "Phthiical Insanity" may be applied.

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Paralysis of the Insane.—Eighteen patients were received into the asylum during this year, labouring under paralysis of the insane. There can be no doubt that the insanity in this form is caused by organic disease of nerve tissue; all are agreed, I think, on this. At first I intended to give an outline of the pathology of this disease, as found in the numerous dissections made of the brain and spinal cord during the last five years; but this report has already extended to such a length that I must defer this interesting and important part of the subject.

Paralysis of the insane.

This form of disease is to be met with amongst all classes and ranks in the service.

A few years ago it was supposed to be a disease peculiar to middle age, from forty to fifty years; but it is to be found at all ages, from twenty-one and upwards. Of seventy-five cases, fourteen were between the ages of twenty and thirty, the youngest being twenty-one years;

32	between the ages of	-	-	-	-	30 and 40,
20	"	"	-	-	-	40 " 50,
7	"	"	-	-	-	50 " 60,

and two from sixty to seventy.

Sometimes the disease is heralded by a loss of motor power in the lower extremities, which would imply that the diseased action of softening began in the spine, leaving the primary centres, or seat of intelligence and ideas, in a great measure untouched. In others, the seat of intelligence is the first part attacked, through the irregular circulation and thickening of the membranes. Disease here proceeds downwards. In others, the secondary centres give most evidence of diseased action, while in the majority of cases the whole three centres are simultaneously attacked. I have patients here who have completely lost motor power in the lower extremities. They cannot stand or walk, being only able to move their legs in bed; memory is to a certain extent good, and the individuals can give rational answers to questions put to them at all times, except when their bowels become constipated, then a condition supervenes similar to that described under phthiical insanity, which is at once removed by a purgative. The organic changes in the nerve tissue at all times precede the mental symptoms, which may be ushered in by an attack of mania, with delusions, that are, as a rule, of the high and exalted kind.

When labouring under maniacal symptoms the danger is that the patient may become exhausted suddenly, and die in consequence of his refusal of food. In the cases I have seen of mania, whether arising from the degeneration peculiar to general paralysis or other organic changes, and when the person refused food, I have for the last three years fed by the stomach-pump, and I would recommend this to be done, as by it life will be prolonged; but when patients in the advanced stages of the disease refuse food, I am of opinion it is not of any advantage to feed them by force, for reasons which will be explained when I treat of "forced feeding." The mental symptoms in others may appear in the form of pleasant delusions of immense riches; or of being a member of the Royal Family; and these stages of delusions may continue for some time, and the patient pass imperceptibly into dementia, when he may be quiet and easily managed, or he may become perfectly incoherent, and not able to articulate, but continue noisy, restless, and dangerous to himself and others; inasmuch as he will attempt to walk in this state, and being very unsteady on his legs, he is apt to fall and hurt himself, or he will attack other patients. I have seen some pass in a few days from apparent health into a state of dementia, there being no stage of delusions; the dementia, with complete loss of memory, thickness of speech, and unsteady gait, coming on at the same time. There are others whose sensorial ganglia are, I believe, in such a progressive state of softening, that from the sensations sent through the whole system, they have no rest by day or night, as if a hidden power was at work, keeping up a constant state of irritation in the most sensitive parts of the nerve tissue, which compels them not to give themselves or others any rest. These are sad cases, and it is in such I have found the benefit of treatment by hydrate of chloral. I may state here, that I adhere to all the favourable statements I have at different times made

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about that medicine, when judiciously given in this formidable disease. I have given it largely, and with a liberal hand, and only once have I seen anything like prostration, and that occurred shortly after I first began to give it. To a patient with symptoms similar to those described, who had no rest, and was constantly on the move, I administered 6,000 grains in the course of ten months. It was only given when necessary, not daily as a matter of routine, and never unless he was first seen by myself or the staff surgeon. It is my rule to feed patients taking chloral during the night, when they were awake, and to this practice I attribute the immunity from dangerous symptoms. My great aim in treating such cases has been to endeavour to procure quiet and rest by regulating the action of the bowels, getting the patients to take as much nourishment as they could, and administering chloral when necessary. Some writers have seriously recommended walking such patients in an airing-ground until they tire themselves, and so are forced to keep quiet. It appears to me strange, that any one who understands the pathology of the disease should make such a proposal. How would it do to exercise a person with extensive softening of the lungs, to induce sleep. The one is, in my opinion, as correct as the other.

In other cases the disease is ushered in by great depression and delusions of despair. The exalted delusions are found in cases of congestion, the depressing with an anæmic state of the brain. Although, however, it is evident that the changes which take place in the membranes of the brain, in the brain itself and spinal cord, are the immediate cause of the insanity, to what are we to attribute these changes in the nerve tissue. Is it dependent on the original constitution of the individual? or is it dependent on anything peculiar to the Naval Service? Is it dependent on diet, such as salt provisions, which although sufficient in quantity are insufficient in quality, and not throwing into the system enough nourishment to meet all the sudden demands made on it, such as take place after a debauch on shore, and that the reparative process cannot be accomplished, consequent on the diminished nutritive element. I have been induced to make these remarks, in consequence of my finding that great stress is laid on general intemperance and other excesses as the chief causes of this form of nerve softening, and from the fact that I find the best men, as far as character and efficiency as sailors and gunners are concerned, to be the very men afflicted with this incurable disease.

Another question. Is this disease more common among seamen than among landmen? and if so, is it more prevalent among seamen who have been on long voyages, and who lived on salt provisions for a long period within the tropics? These are questions which can only be decided by further inquiry.

The disease is as common among the effective seamen as it is among the pensioners, and more common among the warrant officers who come from the seamen's class than the other officers. Pensioners who come with this disease sink rapidly into the grave, more so than the men who come from the ships. This may be accounted for by the fact that they are older men, but I think it may also arise from the small amount of nourishment they have had for some time previous to their coming, and the intemperate habits some of them fall into, the result of the disease, and having no one to check them. These men as a rule have borne a good character when afloat, have been much within the tropics, and who, on leaving the service, have found it difficult to add a pittance to help the pension on which they live. The pension is expended, want and starvation supervene, and with this depression, low spirits, and a complete breakdown. From a state of depression he passes suddenly into the region of exalted delusions and extravagance. Such is the sad history of many a poor pensioner, as far as I have been able to collect it. Intemperance is a part of the history, but on inquiry I find it to be the result of the insanity.

It is strange that there are several non-commissioned officers of marines here with this disease. Men of excellent character, who, when at barracks, had a good outside appearance to keep on a pittance, and support a wife and children.

Half-starvation and anxiety come together, and they go down the hill. I believe the disease is to be found increasing among the poor population, in the large manufacturing towns where great poverty exists. The conclusion from my present information is, that insanity is a disease which will be found to prevail wherever there is a cause at work to lower and depress the nerve energy.

I have known it to appear after blows on the head and spine, and when such take place

place no great time elapses between the injury and the commencement of progressive degeneration. I have also known it to appear under secondary syphilitic disease; after excessive sensual indulgence, after a long continued course of hard drinking, after a sudden shock to the system; and I have known it to follow, in two cases during the period of this report, after great depression. Both came here with decided symptoms of general paralysis. Here, as in other forms of insanity, one must come to the conclusion that all these may be the exciting causes, but the chief cause is the curse of an original taint.

I am fully borne out by subsequent experience, in the remarks I made on the rise of temperature in this disease, as detailed in the Report on the Health of the Navy for 1863. There is one precaution I would desire to make, and that is, that in active tuberculosis it is difficult to distinguish between the increase of temperature arising from progressive nerve softening and softening of lung substance.

SUMMARY FOR 1869.

Average number resident throughout the year was 182.

Per-centage sick on total number resident, 31·3.

Per-centage cured of those admitted on the sick list, 22·8.

Per-centage of deaths on total number resident, 12.

Total admitted during the year, viz. :

Officers	-	-	-	-	-	-	-	7
Seamen	-	-	-	-	-	-	-	13
Marines	-	-	-	-	-	-	-	6
Pensioners	-	-	-	-	-	-	-	9
TOTAL								35

Per-centage of patients discharged cured to their friends on entries, 48·0.

Employed with the gardener and out-door attendants	-	-	23
" tailor	-	-	8
" painter	-	-	1
At wash-house and with laundress	-	-	20
Cleaning the wards	-	-	20
With house attendant	-	-	4
" cook	-	-	5
Hair picking and mattress making	-	-	4
With the dispenser	-	-	1
TOTAL			86

The labour list has been as high as 100, but the average ranges from eighty to eighty-six. The rule is to employ a patient as soon as possible at some light work unless he is suffering from active disease. Daily care and supervision must be practised in the selection of patients for work. Men who are liable to periodic attacks of mania and epilepsy must be carefully watched, and not employed when they would have it in their power to use suddenly any cutting instrument. The great aim must be to utilise their labour, humouring their own desires and wishes, as such will in the end advance their cure unless organic disease has made too great inroads. They are also employed at such trades as they knew something about before they entered the service. Great care must be used not to employ the general paralytics at work which requires any amount of physical exertion, unless the disease is for the time suspended. I never find that there is any difficulty in getting a patient to do a little work as soon as he begins physically to improve.

The cleaning of the hospital, washing of the linen, and making of nearly all the new clothing, as well as repairing the old, are performed by the patients. Also the hospital grounds are kept in order by them.

During dry and fine warm weather, the officers who cannot in any way take care of themselves are moved daily to their airing ground, where they walk about, accompanied by a sufficient number of attendants. Officers who are able to read but who must be in the airing ground kept under observation, are allowed to take

Officers' exercise.

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the daily papers or any book they may wish for, seats and easy chairs being provided for them.

Those who are old and infirm drive out in a carriage, when the weather is warm, and the well-behaved and quiet ones are allowed to walk in the quadrangle at pleasure. Walking parties of officers go beyond the hospital grounds daily, accompanied by an attendant. There are reading and billiard rooms for the officers, who are well supplied with books, the daily and weekly papers, writing materials, &c. In summer they play croquet. They also go to concerts, and occasionally to the theatre; some of them amuse themselves assisting the gardener a little, but this is voluntary. Besides the billiard table, there are bagatelle tables in the different mess-wards. They frequently attend church outside.

Seamen's exercise.

Each of the seamen's day-wards is provided with bagatelle tables, draught-boards, chessmen, dominoes, cards, books, and papers (both daily and weekly). They have also two large recreation wards, one used as a reading-room, with a library in it, where they read, play cards, bagatelle, draughts, backgammon, and chess; the other is reserved for music and dancing. To these rooms they come in cold and wet weather, by day, and every evening at 6.30 (that is, as many of them as are able to enjoy themselves). During the winter, singers from outside are occasionally hired to amuse them; and the attendants and patients get up concerts, which I am anxious to encourage.

Magic lantern exhibitions and readings are held weekly, and Scripture readings on Sunday evenings. This year eighty went to the theatre, in parties of five at a time, with two attendants. A first class box was set apart for them, so that there was no mixing with the rest of the audience. A little supper was provided on their return, and they all conducted themselves with the greatest propriety. This amusement is very popular. Should a circus or menagerie visit Yarmouth, arrangements are made to send a certain number in parties of thirty or forty. In summer pic-nic parties are sent out; they go to Burgh Castle, a distance of seven miles. A large boat is hired, which will hold about seventy, and half the attendants go. They all dine in the open air, and being accompanied by the hospital musician and some of the patients themselves, who are excellent fiddlers, they do their best, on such occasions, to amuse their fellow patients. They dance and sing, and return in the evening well pleased and satisfied. Such days are much valued and longed for. Fishing parties are sent out, in summer, to haul the seine; this amusement is also eagerly looked for. Croquet is played by the men in summer evenings.

There is an eight-oared cutter, in which officers and men go out on the river weekly, for a pull.

In conclusion, I am satisfied that the violent and insane can be managed without either the restraint of strait jackets or even dark cabins, as long as there are sufficient attendants, and they are properly and efficiently taught how to treat patients. I am satisfied that the destructive habits of the general paralytics can be diminished to a minimum by therapeutic treatment. I am also satisfied, by practical knowledge, that 180 officers, seamen, and marines can be treated in an asylum, from the beginning of the year to its end, without the appearance of a punishment, as here there is not the semblance of it. I am also satisfied that an hospital, with insane patients, can be kept as sweet and clean as any other hospital, and be, at all hours, ready for inspection. Finally, I am of opinion that a sick ward, even with such extreme cases of general paralysis as we have here, when patients are months and years confined to bed, can be kept clean, and the patient without a bed-sore.

ON
H E A T,
AS A
PHYSIOLOGICAL AND PATHOLOGICAL,
HYGIENIC, AND THERAPEUTIC AGENT.

(Based on Experiments made in H.M.S. Bristol, during 1866-70.)

BY

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BY

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"A theory founded on experiment and not assumed, is always good for so much as it explains. Our inability to push it indefinitely is no argument at all against it. This inability may be owing to our ignorance of some necessary mediums, to a want of proper application, to many other causes besides a defect in the principles we employ."—BUCKE, "*On the Sublime and Beautiful*."

WHILE modern research is daily demonstrating the influential part played by the widespread and now easily controlled agencies termed the "imponderables,"—viz., heat, light, electricity, and magnetism, &c.,—in many of the great operations of nature, both in the animate and inanimate worlds, it is also developing their physiological and pathological importance, their medical and surgical, hygienic and therapeutic value; nor have their sanitary and curative powers yet attained their highest appreciation. The media with which nature directly or indirectly sustains healthy life are surely those with which its perversion (disease) is most likely to be successfully opposed. Natural and artificial heat, and its reverse (or, rather, absence) cold, besides being longest recognised, are perhaps the most powerful, manageable, safe, useful, and generally applicable of them all, as prophylactic and remedial agents.

Not a few of the great operations referable to these forces in the inorganic or physical, have their analogue in the organic or physiological world. Thus the heat which emanates from the sun, one of the greatest of all motive powers, influences the human frame very much as it does the earth we inhabit. Acting on the sea and air, especially near the Equator, their lightened particles rise and overflow, to form those great and beneficent winds and ocean currents, so important in the sanitary as well as in the social economy of the globe. So, in similar circumstances, climatic heat chiefly affects the finally divided cutaneous capillaries, the blood flowing thence from internal parts, to produce equally great and vital changes in the human economy. In all three the agent, a physical one, is the same, viz., heat. It acts in the same way, viz., as a *vis à fronté* or attracting agent; and, while solids, liquids, and gases are alike acted on, the manner in which this is effected corresponds; the latter two, or vivifying air and ocean in the one case, and the life-sustaining blood in the other, being directly influenced, the solids being only indirectly and in a minor degree affected by and through these. The parts acted on are the same, viz., that nearest the heating agent; the thin upper layer of water, the lowest stratum of air,* and the cutaneous surface

* The air being heated not directly by the sun, but indirectly and by radiation from the air and ocean.

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surface or "shallow waters" of the human circulation: the primary effect is the same, viz., a change in the direction of original currents: the final results are the same, viz., purification and modification of temperature: while the ultimate objects in all are identical, viz., the promotion of the health and comfort of the different forms of life they severally sustain, of the body nourished by the blood, and of the animals and plants which occupy the air and ocean.

Heat is thus as important a physiological as it is a physical force; and the blood "in its circuits," alike influenced by the Agent which "the winds and the sea obey." Governed by the same laws, its movements are as harmonious and subject to order; and the general physical and general hygienic and curative schemes of nature, thus closely connected, have an evident affinity with the equally salutary ones of that wonderful microcosm, the human body. Without these phenomena of currents, winds, and circulation, the heat of tropic lands and seas, and the cold of other regions, would be intolerable; and those of the skin and body too high or too low for the maintenance of their vitality: while all three—the air, ocean, and blood—would rapidly become impure and unfit to sustain life. While the atmosphere and ocean, like the blood, are thus tempered and moulded, to a certain extent, to the necessities of their animal and vegetable inhabitants, their more or less pliant frames, like our own, do the rest; thus meeting nature, so to speak, half way.

If not the primary, the most important effect of heat or cold on the body is on the blood, "which is the life." Through it the organs of vegetable life, the respiratory, alimentary, secretory, and especially the circulatory, are secondarily influenced. The corresponding result on the organs of animal life, the muscular and nervous systems, is less sudden and marked; and hence, though important, less deserves attention.

The general *physiological* effect of tropical heat on the blood is to withdraw it from the centre of circulation to its periphery; from the vessels of thoracic, abdominal, pelvic, and circum-osseous organs and parts to the vascular system of the skin. During this process the tubes and contents of the former diminish, as those of the latter dilate and tumefy. The reverse happens under the cold of temperate and especially frigid regions; the interior becoming injected and turgid at the expense of the chilled surface. Hence during climatic changes, especially those involving great ranges of temperature, the balance of the circulation is constantly varying, the vital tide-wave tending at one time towards internal, and at another time towards external parts. In effecting this, the sedative, heat, has a *vis à fronté* effect on the general blood-current, by reducing the tone of the cutaneous nerves and capillaries, and thus favouring the ingress of blood into the latter: while the tonic, cold, has an opposite, or *vis à tergo*, influence on the circulation, inasmuch as it braces the cutaneous nerves and vessels, and thus forces the stream inwards.

The more tangible effects of change from high to low latitudes, have been long recognised; and chiefly exaggerated or impaired function, especially of the nutritive and eliminatory systems—the skin, liver, lungs, kidneys, &c.—manifested by hyperæmia of the surface, general lassitude of body and brain, a diminished appetite, respiratory and urinary function, an increased thirst, cutaneous and biliary secretion; the results under a contrary change of climate being of course reversed. And it was all along noticed that these apparently very dissimilar vital phenomena occurred under identical conditions; but we can now not only interpret their nature, but also define their extent, correlation, and pathological, etiological, hygienic, and therapeutic bearings. Although materially influenced by various meteorological agencies, especially changes in the specific gravity, humidity, electricity, and perhaps chemical composition, of the atmosphere, temperature is unquestionably their chief cause; so that, while individually they are links of one chain, collectively they form a group; inasmuch as they are primarily the result and visible manifestation of the same agent—viz., heat—and secondarily of a thereby induced re-distribution of the general current of the circulation, a flow surface-ward and inward ebb under heat, and the reverse under cold. Temperature being the cause, they are the effect; and it is easy to understand why, when the functions of internal organs are thus lessened, those of external ones, especially the skin, are increased, and *vice versâ*. One set is vicarious of the other; and this highly developed vicarious capability is meant as much to meet the requirements of health as to encounter the effects of disease

disease. These facts give an established basis, not only for the physiology, but for the pathology of transitions of climate. On the nice adjustment of this balance we continually depend for health and comfort. Harmonious action is health ; its disturbance disease. In either case, if one organ is affected, all the others are equally influenced ; or " if one member suffer, all the members suffer with it."

The effect of *season* resembles that of climate ; there being a surface derivation of the blood during summer, and a revulsion inwards during winter. But, though important, these are necessarily more slowly induced and less decided than those following the more sudden and greater changes involved in a change of latitude, which takes weeks instead of months in its accomplishment, and includes exposure to a higher range of temperature.

But, besides these great changes in the mass of air, ocean, and blood, which follow a general exposure to heat or cold ; minor currents and circumscribed determinations of blood also occur from the local application of the same agencies, similar both in cause and effect to those local winds and tides common in all parts of the globe. Instances of this, however, though occasional, are more familiar as the result of artificial than of natural temperature, which seldom affects limited parts, but usually involves the entire surface.

Artificial heat and cold have a similar general or local effect in attracting the blood towards, or repelling it from, the surface. Thus a sudden change from the cold external atmosphere to that of a heated room, or *vice versa*, which include a great rise or fall of temperature, induce a corresponding but more speedy diversion from or towards the skin, than either climatic or seasonal transitions ; and as the body and vascular system have less time to accommodate themselves to new conditions, this is a more trying, and it may be dangerous process. The more familiar effects of locally applied artificial heat or cold are necessarily, from their suddenness, of more serious import than those which occasionally result from climate or season, although of less moment than those involving the entire frame.

Harvey demonstrated a valuable fact, when he showed that, by putting a ligature on the arm until the veins were distended, and then cooling the limb down considerably, sudden relaxation of the ligature was followed by a deep sense of cold in the thorax. This experiment has its fellow in the realities of every-day life ; and its converse is equally familiar. By inserting the hands or feet in hot water, a warm sensation is soon felt in the thorax, abdomen, and general interior. Experiment would doubtless show that the same, in a more intense form, follows the application of heat or cold to the entire surface. It is interesting to learn that by thus locally or generally heating or cooling the skin, the temperature of the blood and body generally can be somewhat raised or lowered temporarily ; although prevented from going too far either way by well-known physiological laws, which keep it down in high temperatures, by increasing the perspiration, evaporation, and abstraction of caloric ; or keep it up in cold latitudes by augmenting the heat-generating oxydating processes in the lungs and general tissues. But it is far more important to know that by the same means we may attract or repel no inconsiderable portion of the blood from the surface to drain or flood the interior of the body, either of which becomes inundated at will, according to the agent we employ ; and also to know that while the cutaneous capillaries have considerable control over this diversion in the blood-current, the chief motive power in the circulation, viz., the heart and great vessels, has little or none. The great object of the law to which the vascular system is so obedient, is to accommodate the various organs and tissues to altered meteorological and telluric conditions, so as to assimilate them to those of native races, and thus induce what is termed acclimation.

It will be obvious, that while the necessary blood-purification is carried on by this beautiful adaptation of means to ends, the bodily temperature is likewise kept up at a suitable standard. For the decreased internal circulation which follows subjection to heat necessarily lessens the generation of caloric, both in the lungs, which absorb less oxygen, and in the tissues, which have a smaller amount carried to them : and, on the other hand, although the cutaneous capillaries are congested, the heat of the skin is not thereby increased, but kept down by increased perspiration, evaporation, and abstraction of caloric ; while by the opposite influx of blood under cold, the heat, both of the interior of the body and of the exposed skin, is kept up by an increased respiratory function and

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and oxydation of the tissues, and a diminished abstraction of caloric by surface transpiration.

Recent observation has gone far to define the extent of this hæmatic and functional derivation under exposure to heat and cold in certain organs, especially the lungs, kidneys, and skin; from which we may in some measure judge of its extent in others. Thus it has been ascertained, that on proceeding from England, and a temperature of 65° Fahr. to the Equator, and a thermometer at 83° Fahr., *i.e.*, by a difference of 18° Fahr., there is a decrease in the quantity of air respired, and necessarily of carbon exhaled, of 10·9 per cent., which corresponds to an equivalent diminution in the quantity of blood passing through the lungs, that may be roughly calculated at 15·62 fluid ounces.* This is still further reduced by 4·72 per cent., *i.e.* to 23 fluid ounces, by a decrease in the pulmonary exhalation of watery vapour.† Under similar circumstances the urine, and necessarily the blood from which it is secreted, are decreased from 59·54 to 42·04 per cent., *i.e.*, by 17½ per cent.‡ While, on the other hand, the perspiration, and consequently the cutaneous circulation, rise from 8·55 to 30·07 per cent., *i.e.*, by 22 per cent.§ We know that the urine is decreased by so many fluid ounces daily, and the perspiration increased by so many fluid ounces. The quantity of blood from which this is secreted is necessarily considerably greater; but we cannot, as with the lungs, where we have the displacement of blood by air to guide us, estimate the exact quantity by which the blood-current of the kidneys is decreased, or that of the skin increased, with greater exactitude than that the total reduction in the internal circulation from the lungs and kidneys alone, amounts to 33·127 per cent., which goes to augment that of the skin. The calibre and contents of the heart, great arteries, and veins, and the vessels and capillaries of other internal organs, are likewise correspondingly reduced; but, for obvious reasons, we cannot even so readily as this determine its extent, although it doubtless adds considerably to the general effect.|| Opposite results of course prevail under an opposite transition of climate.

With these results, those of a sudden exposure to artificial heat correspond, as on entering a highly heated room from the cold external air, or the reverse; but in this case the increase or decrease in the circulation and function is not quite so marked, because gradually augmented heat ultimately debilitates and relaxes the cutaneous capillaries more than a sudden exposure, so that they dilate, receive more blood, and excrete more abundantly at the expense of the internal circulation; while the slow induction of cold, causes greater ultimate contraction of the cutaneous capillaries, a smaller secretion, and necessarily a larger determination inward, than its sudden application.

Though doubtless considerable, it is difficult, and, indeed, impossible, to accurately determine the extent of those local determinations towards, or revulsions from, certain parts, under the local application of heat or cold.

The final effect of heat in congesting the skin, or of cold in distending the vessels of the interior, depends on the suddenness of its application, on its intensity, and on the state of the implicated organs. If moderate, slowly applied, and the tissues are functionally and organically sound, the involved changes are salutary. Hence it is why, on entering the warm genial atmosphere of the Tropics, the frame feels light and free, and the spirit joyous. Like the winds and waves "they clap their hands for joy;" but very great and sudden changes, especially if repeated or prolonged, and the climate one to which the race is not accustomed, are more unsafe, particularly if any of the organs or textures are unsound, vitally weak, or the seat of any original or acquired morbid predisposition. Under this they may, yielding to the strain, cease to properly fulfil their functions, and health suffer, the results being no longer purely physiological. Nature's laws are seldom long broken with impunity, and that of climate is one of the most rigid.

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* Proceedings of the Royal Society, vol. 18, p. 520-24.

† *Ibid.*, vol. 19, p. 297.

‡ *Ibid.*

§ *Ibid.*

|| The liver is probably an exception to the law; its congestion and secretion being increased in the Tropics, where it aids the skin in vicariously excreting carbon for the functionally inactive lung. This increase, however, in health, is perhaps not so great as usually supposed.

The *pathological* effects of locally or generally applied heat or cold may be said to consist in these physiological phenomena in an exaggerated form. The *modus operandi* is identical; the results differ only in intensity. If the influx of blood and call on the vicarious secretive powers during change of climate are too great or prolonged, for organs which are weak and unable to have their circulation or function unduly increased, or for frames endowed with little inherent vitality, morbid action is apt to be excited. A more sudden exposure, as on coming from a highly heated room to the cold external air, or sitting in tempting draughts when perspiring, or the reverse, is still more likely to end in disease. This may happen even if the application is comparatively local; and both are recognised as among the most frequent causes of thoracic, abdominal, pelvic, and inter-cephalic disease, in temperate and tropical latitudes alike, *e.g.*, diarrhoea, dysentery, hepatic congestion and inflammation, catarrh, pneumonia, cynanche, coryza, and many other ailments; and it may be easily understood why a sudden influx of blood, from exposure to cold for example, into predisposed lungs, over the 15.62 per cent., necessary to adapt their excretion of water and carbon to altered conditions, should induce engorgement, stagnation, and ultimately inflammation of the pulmonary capillaries and surrounding tissues. Once begun, this is necessarily aggravated by this obstruction in the blood-current, especially if these organs are already clogged by tubercle or some other form of deposit, the heart and great vessels becoming secondarily involved and laboured in action. Hence also why a similar influx to the kidneys on going from a warm to a temperate climate, over the 17½ per cent., necessary to adapt their secretion to new conditions, is apt to induce nephritic congestion or inflammation, especially if the organ is already unsound, and granular, fatty, &c.; and also why the cutaneous capillaries become overburdened and hyperæmic, if more than the additional 33 per cent. necessary to carry on vicarious action for the lungs, kidneys, &c., is forced into them, especially if its texture is generally or locally diseased; and so of other organs.

That this is the true explanation of the physiological and pathological effects of cold is directly, while that it is so of heat is indirectly proved by the post-mortem appearances produced when cold has been so intense as to induce death. The morbid changes are similar to those above detailed, only more decided. Thus Quelmals found the vessels of the brain turgid, and the large veins and arteries filled by polypous concretions; and he refers the sopor preceding death to congestion of the cerebral vessels and effusion of serum into its ventricles. Rosen also observed the inter-cranial vessels engorged. Cappal found the blood and fluids accumulated chiefly in the thoracic and abdominal viscera. While Dr. Kellie, besides these appearances, noticed a bloodless state of the scalp, engorgement of the inter-cephalic sinuses, and remarkable redness of the small intestines from sanguineous turgescence.

The law of a re-adjustment of the circulation in accordance with temperature, so important physiologically and pathologically, has an evident correlative bearing on the prevention and cure of disease. Heat has been long recognised as an important *hygienic and therapeutic* agent, and we can now readily understand the rationale of its action. In its most commonly witnessed form, that induced by change of climate, we see that it is followed by various functional and textural changes in the different internal and external organs; and that the tropical condition of the lungs is an increased capacity for air, accompanying and resulting from a diminished vascularity; the circulation of the kidneys, intestines, heart, great vessels, and other internal organs being likewise reduced; while that of the skin is a greatly augmented vascularity, its functions at the same time increased, that of the others being lessened. The extra-tropical condition is the reverse of this. Artificial heat or cold have a similar influence, and their local effect, though not so decided, closely corresponds. These facts thoroughly explain the well-known efficacy of change of climate in the prevention when imminent, and relief or cure when actually present, of many internal diseases. In a tropical or sub-tropical climate, not only is the circulation, but when the organ is a gland, its secretion, materially diminished by vicarious action of the skin. As the relief thus obtained is both functional and hæmatic, it is doubly sanative; and the quantity of blood and work so transferred deserve special attention.

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* Copland, "Dictionary of Medicine," vol. i. p. 357.

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In a temperature of 83° Fahr., however induced, naturally or artificially, by climate or by heated air or water, lung work and circulation are diminished by 15·62 per cent., kidney work and blood-current by 17½ per cent., and so on with other organs; while the cutaneous congestion and secretion are diminished by at least 33 per cent. by an opposite change of climate. Comparative physiological rest, which gives the *vis medicatrix* time and opportunity to assert its sway, and overcome the *vis morbi*, is as beneficial in impending medical as in surgical ailments.

Thus it is, for example, how a transition from temperate to certain sub-tropical climates prevents, arrests, or even cures, phthisis.* Besides their mild, equable, non-irritant air seldom inducing those catarrhal attacks, or local bronchial inflammations, which so frequently lead to the exudation of new tubercle, and to the breaking down of former deposits, both the circulation and function of the weak or suspected lungs are materially reduced by vicarious action of the skin, liver, &c.; the benefit being both local and general. May not these facts, so suggestive hygienically and therapeutically, especially for European residents in, or travellers to or from tropical climates, be more frequently utilised in medicine? As in phthisis, might not benefit be similarly obtained in functional and organic ailments, of the lungs, heart, and great vessels, the kidneys, intestines, bladder, and other internal organs. The transference of so much blood and secretion from the kidneys to the skin is of great moment in the treatment of certain nephritic diseases, as is a withdrawal of the circulation from the mucous to the cutaneous surface in dysentery, &c.† Many skin diseases, on the other hand, and for an obvious reason, are aggravated by tropical, sub-tropical, or even summer weather, and relieved by a temperate atmosphere. The law also shows why that by no means small class of affections, which are worse in winter and better in summer, are benefited by a sojourn in a low latitude; and why advantage is similarly gained in cases of heart obstruction, from malformation or otherwise.

The same law explains the efficiency of the various kinds of bath in the treatment of many diseases; also why the local application of heat in the form of foot or hip-bath, aided perhaps by some other derivative, e.g., a diaphoretic,‡ is so often efficacious in curing incipient or even more developed coryza, cynanche, catarrh, &c.; and also how the dyspnoea common in bronchitis, in pneumonia, and in pulmonary engorgement from cardiac hypertrophy, especially of the left ventricle, or from mitral regurgitation, is so often and simply relieved by the pediluvium, as are also some varieties due to changes in the pulmonary circulation itself; and many other kinds and phases of disease will at once suggest themselves to the practical physician, where the hæmatic and functional derivative effects of climatic or artificial heat, whether obtained in the general form by migration, or by the warm bedchamber or ward, or by the hot water, air, or steam bath, or the various local kinds of dry and moist fomentations, poultices, hot air, sand, &c., may be turned to good account as a preventative and remedial agent.

Besides being fruitfully suggestive in the pathology and etiology of internal organs, do not these facts deserve more general recognition, and a fuller adoption in practice? Might we not more frequently avail ourselves of the cue given by

* The more rapid decay of the tissues in thoroughly tropical climates extends to half-organised tuberculous matter. Hence it is why these regions should be avoided by strumous subjects. Besides the danger of the induction of incipient phthisis by the debility resulting from excessive heat, especially if aided by a scanty, innutritious, or noxious diet, &c., latent disease is here especially apt to assume an active form, and, for the above reason, to run its course with astonishing rapidity.

† A valued medical friend informs me, that so long ago as 1857, reasoning solely from analogy, he was so assured of the principles of this law, although unable to give them definite proof, as to feel greatly pressed to push its application to the extreme in the treatment of a chest complaint; and that he subsequently carried it into effect in his own person, for renal calculus; the principal treatment during the passage of which was, strict confinement for months to his room, artificially heated to a tropical temperature, with careful attention to diet and regimen.

‡ The action of heat and of artificial or medicinal derivatives, which are such useful adjuncts to this natural one on which we chiefly rely, are very much akin, although differently induced. For example, sudorifics determine blood to the skin, diuretics to the kidneys, purgatives to the intestines, and blisters, sinapisms, &c., to local spots.

by Nature, as to the means and extent by which the circulation and function of diseased or overtaxed organs may be relieved by having their blood-current and secretion transferred to sounder ones? Does not this great and universal law of a redistribution of the blood by change of climate or artificial heat, its derivation from internal organs to the surface under heat, and inward repulsion under cold, give an established, sound, and philosophical basis on which to erect a new, safe, permanent, and satisfactory system of hygienics and therapeutics, to be used, not in all, but in that large and important class of diseases of daily occurrence, and chiefly and primarily referable to some disturbance in the circulation? The preventative and curative effects of this law are especially obvious and applicable in imminent or actual congestive and inflammatory affections of internal organs. Would not its more complete acceptance as a conclusive truth go far to reform the treatment of these ailments, and put it on a definite footing, and heat, now largely employed empirically, be made, with our increased knowledge of its operation, to supersede many of the medicinal therapeutics now in vogue, which generally act on special organs, and not like this on all or nearly all; the operation of not a few of the most valuable of them being moreover, unlike heat, very different in health and in disease? Unlike many of the present systems, based on theory, and often so uncertain as to be doubted, if not entirely disbelieved in, this, founded on fact, and on a well-established physiological law, would be certain in its operation, and consist merely in the more active use of Nature's own method of prevention and cure in many diseases, both acute, sub-acute, and chronic. Heat is the chief agent in producing general air and ocean currents, Nature's great system of ventilation and purification, and thus indirectly her most powerful hygienic and therapeutic instrument. If judiciously employed in more direct forms, may it not prove one of her best special preventive and curative agents for the human frame? And following her indication, as we adopt heat as the motive power in our best forms of artificial ventilation, so might we not be equally fortunate in this, if employed more frequently, although the agent may not perhaps be so universally applicable in hygienics and therapeutics as in ventilation? The more we base our hygienic and therapeutic systems on well-established general laws, and the oftener we use the agents Nature herself employs to promote or restore health and oppose disease, the more likely are we to attain success. It is surely both prudent and philosophical to imitate Nature herself, and employ physiological processes to prevent or cure pathological conditions. As with other remedies, the indiscriminate use of heat would be injudicious, and not likely to prove successful; nor, even when well-chosen, need it always be expected to have the wished-for effect. But assuredly, both in its natural and artificial forms, it might be far more frequently employed than now as an hygienic and therapeutic agent; and we may well conclude that "there is no more important subject in medicine than that of the influence of temperature on the human body. Heat must be a main element in every process of health and disease, and in the operation of every remedy."†

* Do we not frequently err in adhering too rigidly to some favourite system of therapeutics; whether it is the vaso-motor, cellular, chemical, or any other; are not many, if not all, of them represented in disease; one ailment being explained by one, and another by another?

† See two valuable papers "Reflections on the Influences of Cold and Heat upon the Living Body," by T. Wilkinson King, Esq., "London Medical Gazette" for June 23 and July 21, 1843.

NOTES AND STATISTICS
RELATING TO THE
BOYS UNDER TRAINING FOR THE ROYAL NAVY
IN 1870.
By SEATON WADE, R.N., Staff Surgeon of H.M.S. Impregnable.

NOTES AND STATISTICS

RELATING TO THE

BOYS UNDER TRAINING FOR THE ROYAL NAVY

IN 1870.

The training of boys as seamen to serve in the Royal Navy is an institution that has been only gradually developed.

More than twenty years ago a limited number of boys, first under the name of apprentices, who entered for seven years; and afterwards of boys called novices, who became continuous service men, were in some measure trained for the service, and these appear on the whole to have conducted themselves well; many if not most of the warrant officers now serving having belonged to one or other of these classes. But the system of entering and training boys to supply all the seamen required in the Navy is an establishment of not more than eight years' standing. It is therefore early to judge of its benefit to the service generally, although the marked improvement that has taken place in the character of the seamen of the Royal Navy must be chiefly attributed to this system of training.

Five ships are now employed in training boys, viz. :—

H.M.S. Impregnable	at Devonport,	with a complement of	720
" St. Vincent	at Portsmouth	" "	720
" Implacable	at Devonport	" "	520
" Ganges	at Falmouth	" "	520
" Boscawen	at Portland	" "	520

The whole giving accommodation for 3,000 boys.

The number of boys entered for service in the Royal Navy during the year 1870 was 2884. These were obtained from all parts of the United Kingdom, and some from the Colonies.

In Table I. is shown the place of birth of all boys under training on the 1st of January 1871. The chief towns are given, and some few smaller ones from which boys are usually received; other towns are included in the counties.

TABLE I.

PLACE OF BIRTH.	Impregnable.	St. Vincent.	Implacable.	Ganges.	Boscawen.	TOTAL.
1. ENGLISH COUNTIES:						
Bedfordshire - - - - -	-	3	-	-	1	4
Berkshire - - - - -	1	1	2	5	3	12
Buckinghamshire - - - - -	-	-	2	1	2	5
Cambridgeshire - - - - -	-	2	2	1	1	6
Cheshire - - - - -	7	-	-	2	4	13
Cornwall - - - - -	59	-	39	55	2	155
Cumberland - - - - -	4	-	-	-	-	4
Derbyshire - - - - -	1	-	1	-	-	2
Devonshire, South - - - - -	44	1	39	28	5	117

TABLE I.—*continued.*

PLACE OF BIRTH.	Impreguable.	St. Vincent.	Implacable.	Ganges.	Bocaven.	Total.
1. English Counties—<i>continued.</i>						
Devonshire, North	5	—	6	2	3	16
Dorset	2	6	—	2	15	25
Durham	—	3	—	—	—	3
Essex	2	5	—	—	9	16
Gloucestershire	5	—	2	2	1	10
Hampshire	4	33	—	—	16	53
Hereford	1	1	—	5	—	7
Hertfordshire	2	1	—	1	4	8
Kent	4	16	—	2	27	49
Lancashire	5	2	—	8	10	25
Leicestershire	2	1	—	8	1	7
Lincolnshire	—	4	—	—	1	5
Middlesex	4	3	—	1	1	9
Norfolk	1	—	—	—	1	2
Nottinghamshire	5	—	—	—	—	5
Northamptonshire	2	—	—	—	—	2
Northumberland	4	—	—	—	—	4
Oxfordshire	2	1	—	2	1	6
Shropshire	1	—	—	—	1	2
Staffordshire	5	—	1	3	3	12
Sussex	—	15	—	—	3	18
Surrey	3	5	—	—	12	20
Suffolk	—	6	—	8	9	23
Somersetshire	16	—	6	2	1	27
Warwickshire	—	1	—	2	—	3
Wiltshire	4	4	8	—	9	20
Westmorland	—	—	—	1	—	1
Worcestershire	3	—	—	—	—	3
Yorkshire	6	4	—	1	7	18
2. ENGLISH TOWNS:						
Bath	2	1	5	4	4	16
Bristol	11	2	5	4	3	25
Birmingham	14	3	11	12	1	41
Brighton	4	15	—	4	1	24
Bideford	1	—	—	6	—	7
Bridgwater	8	—	5	2	—	10
Birkenhead	1	—	4	3	1	9
Cheltenham	2	—	7	2	1	12
Chichester	—	7	—	—	—	7
Chatham	1	6	—	—	6	13
Coventry	—	—	1	4	1	6
Cardiff	1	—	—	1	—	2
Deal	2	1	—	—	10	13
Dover	—	10	—	1	1	12
Deptford	8	10	—	—	5	18
Devonport	51	6	84	47	5	193
Devizes	—	—	3	—	2	5
Derby	—	—	3	2	—	5
Exeter	16	1	17	7	2	42

TABLE I.—*continued.*

PLACE OF BIRTH.	Impregnable.	St. Vincent.	Implacable.	Ganges.	Boscawen.	Total.
2. English Towns—<i>continued.</i>						
Falmouth - - - - -	1	1	-	11	-	13
Fareham - - - - -	-	10	-	-	3	13
Gloucester - - - - -	6	1	6	15	2	30
Greenwich - - - - -	1	8	-	-	4	13
Gravesend - - - - -	-	3	-	-	5	8
Gosport - - - - -	-	23	-	-	2	25
Hull - - - - -	1	-	-	1	3	5
Hereford - - - - -	7	-	4	-	-	11
Ilfracombe - - - - -	2	1	-	-	-	3
Leeds - - - - -	2	-	-	1	-	3
Liverpool - - - - -	23	2	-	10	9	44
London - - - - -	86	260	63	90	195	694
Manchester - - - - -	10	1	14	10	-	35
Macclesfield - - - - -	2	-	-	1	-	3
Margate - - - - -	-	2	-	-	-	2
Merthyr Tydvil - - - - -	1	-	3	-	-	4
Newcastle - - - - -	3	-	-	-	-	3
Norwich - - - - -	-	5	-	-	4	9
Nottingham - - - - -	-	-	10	3	-	13
Northampton - - - - -	-	2	-	-	2	4
Plymouth - - - - -	52	-	108	33	-	193
Portsmouth - - - - -	3	114	-	2	7	126
Preston - - - - -	4	-	-	-	-	4
Pembroke - - - - -	-	-	2	4	1	7
Penzance - - - - -	11	-	-	1	-	12
Ramsgate - - - - -	-	-	-	1	1	2
Reading - - - - -	-	1	-	-	1	2
Salisbury - - - - -	-	4	-	2	4	10
Sheffield - - - - -	2	1	-	-	1	4
Shrewsbury - - - - -	2	1	2	-	-	5
Sheerness - - - - -	2	2	-	-	5	9
Southampton - - - - -	-	32	-	2	6	40
Stafford - - - - -	-	-	2	-	-	2
Taunton - - - - -	7	-	4	2	1	14
Totnes - - - - -	3	-	3	1	-	7
Torquay - - - - -	11	-	13	10	-	34
Teignmouth, Devon - - - - -	4	-	14	2	-	20
Uzbridge - - - - -	-	-	-	-	2	2
Woolwich - - - - -	3	16	8	6	5	38
Weymouth - - - - -	-	1	-	-	9	10
Worcester - - - - -	4	1	6	11	2	24
Winchester - - - - -	-	3	-	-	-	3
Warwick - - - - -	5	-	2	1	1	9
Yeovil - - - - -	2	-	-	5	-	7
North Wales - - - - -	4	1	-	-	-	5
Isle of Wight - - - - -	2	16	-	-	1	19
Isle of Man - - - - -	3	1	-	-	-	4
Scilly Islands - - - - -	2	-	-	-	-	2
At Sea - - - - -	-	1	-	1	-	2

TABLE I.—*continued.*

PLACE OF BIRTH.	Impreguable.	St. Vincent.	Implacable.	Gauges.	Bocawen.	TOTAL.
3. SCOTLAND—COUNTIES - - - -	9	3	-	4	7	23
Edinburgh - - - - -	13	16	-	10	3	42
Glasgow - - - - -	9	-	5	19	11	44
Aberdeen - - - - -	3	1	-	1	3	8
Orkney Islands - - - - -	-	-	-	-	1	1
4. IRELAND, NORTH - - - - -	20	5	-	6	8	39
„ South - - - - -	9	2	-	1	-	12
Dublin - - - - -	17	2	-	1	2	22
Cork - - - - -	18	-	7	1	-	26
Belfast - - - - -	33	-	-	1	-	34
Jersey and Channel Islands - - - -	1	6	2	3	1	13
Australia - - - - -	2	1	-	3	-	6
Bermuda - - - - -	-	1	-	-	-	1
India - - - - -	-	1	-	-	-	1
Cape of Good Hope - - - - -	-	1	-	-	1	2
West Indies - - - - -	1	-	-	1	-	2
Canada - - - - -	-	1	-	-	-	1
United States - - - - -	3	1	-	-	-	4
Switzerland - - - - -	-	-	-	-	1	1
Corfu - - - - -	1	1	-	-	-	2
TOTAL - - - -	727	736	526	513	510	3,012

From this Table is found the localities in which the desire for sea life chiefly prevails. The western counties have always contributed largely to the supply of the Royal Navy, and boys from these counties generally turn out well. They enter the Navy from choice, and with some knowledge of the kind of life they will lead; whereas boys from the midland and northern counties, and from the large towns, enter wholly for their livelihood, being utterly ignorant of sea life; a very small number come from the ports on the east coast.

London appears to be able to furnish an unlimited supply, but judging from the number medically rejected, they must be of a very indifferent stamp.

The number received from Ireland is not large, but has considerably increased since the establishment of a recruiting station at Belfast; the boys are chiefly from the north of Ireland.

The Scotch boys are recruited at Glasgow and Edinburgh, but come from various parts of Scotland; they are for the most part intelligent, well-behaved lads, but in this last particular the boys belonging to Glasgow are exceptions.

Boys are entered for the Navy—

On board the training ships;
On board the coastguard ships;
At coastguard stations on shore; and
At the various Marine recruiting stations.

The following Table shows the place of entry and the previous occupation of all boys entered in 1870. Appendix.

TABLE II.

WHERE ENTERED.	School.	Greenwich School.	Errand Boys.	Farm Labourers.	Masons' Labourers.	Factory Boys.	Trades' Boys.	Sea.	Boating.	Servants, In-door.	Grooms, &c.	Gardeners.	Hawkers.	Blacksmiths.	Carpenters.	Rope-makers.	Sail-makers.	Clerks.	Miners.	Workhouse.	TOTAL.
H.M.S. Impregnable, Devonport	42	11	101	98	51	7	49	22	18	11	5	7	4	13	14	2	1	2	2		457
" St. Vincent, Portsmouth	51	5	74	32	52	9	68	18	10	10	3	14	2	7	9	-	1	-	-		365
" Implacable, Devonport	13	4	45	24	20	6	25	8	10	7	1	4	-	-	5	-	-	1	-		182
" Ganges, Falmouth	2	1	6	7	4	-	8	5	2	1	-	-	-	-	3	1	-	1	-		41
" Roseawen, Portland	3	-	1	10	18	-	5	-	5	3	-	-	-	2	1	-	-	-	-		48
" Fisgard, Woolwich	16	-	124	10	118	31	108	18	6	14	9	5	5	7	10	1	4	-	-		492
" Pembroke, Sheerness	6	-	8	10	13	1	18	5	4	5	1	4	2	1	2	1	1	-	-		77
" Penelope, Harwich	-	-	-	3	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-		7
" Mersey, Queenstown	8	-	-	1	4	-	2	-	5	2	-	-	-	-	-	-	-	-	-		22
" Audacious, Kingstown	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		1
" Black Prince, Greenock	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-		4
" Repulse, Queensferry	1	-	5	8	15	5	4	-	-	-	-	-	-	-	-	-	-	-	-		38
" Resistance, Liverpool	-	-	-	-	-	3	2	-	1	-	-	-	-	-	-	-	2	2	1		11
" Valiant, River Shannon	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-		2
" Invincible, Hull	-	-	2	3	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-		7
Recruiting Stations at:—																					
Exeter	2	-	-	36	32	-	5	2	-	-	-	-	-	1	2	-	2	-	-		72
Gloucester	-	-	-	41	25	5	14	1	-	4	2	3	-	1	2	-	1	-	-		99
Taunton	1	-	-	29	2	-	6	-	-	1	-	-	-	-	2	-	-	-	1		42
Bath	1	-	6	2	4	1	7	-	-	1	2	1	-	-	1	1	-	-	-		27
Manchester	-	-	4	-	6	29	11	-	-	1	1	1	-	-	-	-	3	-	-		56
London	3	-	117	-	94	16	120	16	4	15	17	5	5	8	16	-	1	-	2		458
Birmingham	-	-	2	1	18	23	14	-	-	1	-	1	-	-	1	-	1	1	-		68
Leeds and Durham	1	-	-	-	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-		5
Northampton	-	-	-	1	-	1	2	-	-	-	1	-	-	-	-	-	-	-	-		5
Salisbury	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-		5
Liverpool	3	-	9	1	37	15	20	3	1	2	-	1	-	1	-	-	-	8	-		101
Derby	1	-	1	-	1	3	8	-	-	1	-	-	-	1	2	-	-	1	-		19
Shrewsbury	-	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	1	-		5
Hull	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-		2
Merthyr Tydvil	1	-	-	1	1	3	-	-	-	-	1	-	-	-	-	-	-	-	-		7
Edinburgh	4	-	10	3	27	11	23	4	-	1	-	1	-	1	3	-	-	2	-		101
Belfast	6	-	5	4	21	5	10	3	-	1	1	-	-	2	-	-	-	-	-		58
TOTAL	166	21	518	332	561	182	562	107	67	81	44	47	18	43	82	6	3	19	19	6	2,884

Appendix.

From this Table is seen,

- 1st. The stations at which the boys were enlisted, and,
- 2nd. Their social condition.

Boys enlisted in the training ships include those sent from the neighbouring Coastguard stations on shore; and from this source a considerable number is obtained. The *St. Vincent* entered, 213, chiefly from the Gosport station. Boys entered in Ireland, Scotland, and the recruiting stations at Liverpool, Manchester, Birmingham, Derby, Nottingham, Exeter, Gloucester, Taunton and Bath, come to the *Impregnable*, and about one-sixth of those raised in London; from other stations they are sent to the *St. Vincent*. The *Boscawen* at Portland is chiefly supplied from the *St. Vincent*, the *Implacable* and *Ganges* from the *Impregnable*.

With regard to the social condition of the boys it will be seen at once that the class from which the Navy is supplied is nearly the lowest of the community; boys from reformatories, or who have been convicted by a magistrate, are very properly excluded, while, on the other hand, the rule requiring the written consent of the parents or nearest relatives precludes the entry of the wild sons of gentlemen who occasionally enlist in the Army. The highest in the social scale were the so-called clerks in offices, though upon inquiry there had been but slight claim to the appellation; they were generally labouring lads of better education than their fellows, who had been employed writing. I only met with two who had been clerks from the time they left school. The term "schoolboy" includes those who have not been in any employment since they left school; it cannot be taken to signify boys of better class in life, or even of better education; some, however, are direct from Protestant schools in Ireland, and a few had been attending school up to the time of entry. Greenwich School, often taken to be a nursery for the Royal Navy, sends very few boys, and these generally weak, and below the standard.

Farm labourers come almost exclusively from the western counties; though loutish at first, these boys improve wonderfully under training, and turn out good seamen. Errand boys are, of course, town boys; those from the seaports are of good stamp, anxious to get into the service, and generally present themselves as soon as they attain the required age.

Tradesmen's boys appear to have a great desire for sea life, and in the Table the largest number will be found under this designation; their employment being indoor, in shops, warehouses, &c.; they are older than the errand-boy class, and, as a rule, are healthy lads, and readily adapt themselves to ship life.

Masons' labourers, that is, hod-boys, attendants on bricklayers, plasterers, &c., differ chiefly from tradesman's boys in being accustomed to outdoor work.

Factory boys are about the least desirable of the boys who present themselves; indeed, those from the manufacturing towns—Birmingham, Manchester, Liverpool, and Derby—are of the worst stamp of boy entered. Those who have been at sea have certainly the advantage of being less liable to sea-sickness, but it is doubtful if their experience avails them much in training for a man-of-war.

Dividing the occupation of the boys previous to entry into outdoor and indoor, which is perhaps the best practical division, there can be no doubt but that those who have followed the former are to be preferred as better adapted to the life on board ship.

The age for entry was from 14½ to 16½. The physical development required was according to the following scale:

Age.	Height.	Girth of Chest.
<i>Years.</i>	<i>Ft. in.</i>	<i>In.</i>
14½ to 15	4 8½	27½
15 to 15½	4 10½	29
15½ to 16	4 11½	29½
16 to 16½	5 1	30

Weight did not enter into the test of fitness ; but all boys entered in this ship are weighed ; as a rule, boys of 14½ to 15 should weigh at least 85.

Appendix.

15 to 16	"	"	"	100.
16 to 16½	"	"	"	112

The average time for boys to be under training was fifteen months ; they then pass an examination, are rated "first class boys," and are either sent to a gunnery ship or direct to sea. Boys cannot pass for first class till they are sixteen years of age, and at whatever age they enter must be one year under training ; therefore those who enter at fourteen and a half receive eighteen months' training ; and this is a great consideration ; The younger the boy, the greater the effect of improved diet in forming muscle and bone, which, I believe, is one of the great advantages of the training system, and it is surprising to see the rapid development of a boy of sound constitution under the improved diet and healthy exercise obtained on board a training ship. (The age for entry has been altered since the 1st of January in the present year ; boys are not now entered under fifteen, and remain but one year under training.)

The system of examination pursued on entry is as follows : when a boy offers at a recruiting station he is first examined as to his ability to read and write, whether he has the consent of his parents, and whether he comes up to the required standard in height ; and he is then examined by a medical practitioner, who is supplied with a printed form of examination to fill up. In large towns this examination is frequently made by army surgeons at the coastguard stations, the surgeon and agent examines. Boys entered in the Coastguard ships are examined by the surgeons of those ships, and London boys are examined by naval officers at Woolwich ; if they pass this examination they are forwarded to a training ship, where they are again examined, and at this port, a board, consisting of the captain and surgeon of the flagship and the Impregnable, meets once a week to examine all boys who have arrived from recruiting stations, or entered direct on board either of the training ships.

One thousand nine hundred and seventy-seven boys were examined on board this ship during the year 1870. This number does not include the many who apply to enter, but are at once rejected, being either over or under age, not having the required certificates, or being under the required height, and of these no record is kept ; the number given refers only to those whose names are inserted in the entry book as having passed this kind of preliminary inquiry ; and it is necessary to remember that about half of the number had been previously examined at recruiting stations.

The causes of rejection are therefore reduced to two heads :

- 1st. Those unable to pass the educational test.
- 2nd. Those physically unfit.

1st. *Education.* The rule laid down is that the recruit must be able to read and write ; practically, if they can stumble through a few words, and write their names, or a short sentence, and are intelligent lads, they are allowed to pass ; yet this rule excludes from the service a large number of healthy country lads ; as out of the number who applied for entry on board this ship eighty-five were rejected, being unable to read or write ; many did not even know their letters.

2ndly. *Physically unfit.*—Previous to the examination into the physical condition of the recruit, his height and weight are ascertained. On board the Impregnable, boys are examined in one of the bath-rooms (26 feet by 19, and with plenty of light) ; the boy walks, runs, and hops up and down this room ; he swings by a cross-bar, supporting his weight with either hand for at least five seconds ; the chest is then measured round the naked body ; "the boy is to stand erect with his heels together, his arms to hang easily and naturally by his sides, and the measurement to be taken at the termination of the first easy inspiration after the boy has counted one to ten with a loud voice, the measuring tape being passed round the chest immediately above the nipples and below the scapulae." This appears a plain direction, yet the result is very variable, and cannot be absolutely correct ; a very large proportion of those examined on board had been previously examined, and in some cases the difference in measurement amounted to two inches. The examination is then continued, following the directions given in the 33rd article of Instructions for Medical Officers.

Appendix.

One thousand eight hundred and ninety-two came under medical examination, that is 1,977 minus 85 rejected under the educational rule; out of this number 384 were rejected.

The various causes of rejection may be conveniently arranged in the following order :—

1. Girth of chest below the standard, generally accompanied with other signs of weak or faulty development	157
2. Constitutional weakness :	
1. General unsound health	13
2. Muscular tenuity	14
3. Debility; cachexia of large towns; syphilitic cachexia?	20
3. Scrofula	47
4. Phthisis	16
5. Deformed spine	23
6. Contracted or deformed chest	4
7. Malformation of jaw	13
8. Contracted hand	1
9. Index finger of left hand wanting	1
10. Injury of fingers	2
11. Stiff knee-joint	3
12. Deformity of lower extremities	1
13. Malformation of feet	2
14. Defective or weak vision, viz. :—	8
Specks on cornea	
Granular state of eyelids	5
Ophthalmia tarsi	3
Without any external appearance	2
	4
15. Blind of left eye, 1; of right eye, 4	14
16. Myopia; unable to see distinctly beyond two feet	5
17. Impediment in speech	6
18. Otorrhoea and deafness	4
19. Tonsils chronically enlarged	16
20. Decayed teeth	4
21. Palpitation	14
22. Hernia	5
23. Hydrocele	3
24. Non-descent of testes	1
25. Varicocele	6
26. Varicose veins of leg	17
27. Chronic eruptions of skin	2
28. Subject to fits (two from their own confession, and three had epileptic seizures before they were permanently entered)	4
	5
	384

Health.—It might be expected that among a number of carefully selected boys but little sickness would prevail; however, upon examination, several causes will be found in operation affecting their health. In the first place, a large proportion come from a life of freedom to one of restraint and strict discipline: a sudden and complete change is made in their mode of life, and under this many of the weaker lads break down; others come from the close rooms of factories and warehouses to a ship, where they are unavoidably exposed to cold and draughts; such lads are particularly liable to attacks of pneumonia and acute rheumatism. The change of diet or the unwonted quantity of food disturbs the digestive organs of many at first, producing colic, constipation, or diarrhoea. Then, again, they are of the age very liable to eruptive fevers, and a year seldom passes without one or other of these appearing as an epidemic. During the year 1870, scarlet fever prevailed in the Impregnable and in the St. Vincent; a few cases also occurred in the Boscawen and Ganges, whilst cases of measles occurred in all the ships. To these causes must be added the great liability of the boys to accidents in learning their various drills.

The

The average number of sick daily in the several training ships is given in the following Table. This Table is for twelve months, from 1st March 1870 to 28th of February 1871, and refers to boys only.

TABLE III.

S H I P.	Average Number borne.	Average Daily Number Sick.	Per Cent.	Number sent to Hospital.
Impregnable - - -	775	11	1·4	86
St. Vincent - - -	724	10	1·38	197
Implacable - - -	512	10	1·95	65
Boscawen - - -	510	16	3·08	58
Ganges - - -	503	11	2·19	62
Total - - -	3,023	58	1·98	468

The Ganges at Falmouth, and the Boscawen at Portland, being at a distance from a naval hospital, had larger sick-lists, but they sent a smaller number to hospital. Both these ships have sick quarters on shore.

The deaths among the boys in 1870 amounted to twenty, an increase upon the previous year, in which the deaths were fourteen.

TABLE IV.—Diseases which proved fatal to Boys belonging to Training Ships in 1870.

D I S E A S E.	Impregnable.	St. Vincent.	Implacable.	Ganges.	Boscawen.	Total.
Fever, Continued - - -	1	-	-	-	-	1
„ Typhus - - -	-	1	-	-	-	1
„ Enteric - - -	2	1	1	1	-	5
Scarlet Fever - - -	-	1	-	1	1	3
Pyæmia - - -	-	1	-	-	-	1
Pneumonia - - -	1	-	1	-	-	2
Phthisis - - -	1	-	1	-	-	2
Pleuritis - - -	-	-	1	1	-	2
Injury of Knee - - -	-	-	-	-	1	1
meningitis - - -	1	-	-	-	-	1
Drowned - - -	-	1	-	-	-	1
TOTAL - - -	6	5	4	3	2	20

These were all acute diseases, such as might attack any similar number of persons. The cases of phthisis were very rapid in their course.

All the deaths occurred in hospital, with the exception of two on board the Ganges, and one boy belonging to the St. Vincent, who was drowned in the River Thames when on leave.

No death from accident occurred on board any of the ships. Ninety-four boys were invalided in 1870, a decrease of two as compared with the previous year.

The various causes of Invaliding are given in the following Table.

TABLE V.
Boys belonging to Training Ships Invalided in 1870.

DISEASE.	Impregnable.	St. Vincent.	Implacable.	Ganges.	Bocaven.	TOTALS.
Phthisis - - - - -	3	9	2	1	1	16
Pneumonia - - - - -	-	6	1	1	1	9
Scrofula - - - - -	3	1	2	1	-	7
Epilepsy - - - - -	1	1	1	1	-	4
Disease of Heart { Functional - - - - -	1	1	-	2	1	5
{ Organic - - - - -	1	7	4	2	5	19
Chronic Ulcer - - - - -	1	-	-	-	-	1
Psoriasis - - - - -	-	-	-	1	-	1
Rheumatism - - - - -	1	7	-	-	-	8
Syphilitic Cachexia - - - - -	-	-	-	2	-	2
Eneuremia - - - - -	1	-	-	-	-	1
Hernia - - - - -	-	-	1	1	-	2
Otorrhoea - - - - -	-	2	-	-	2	4
Bright's Disease - - - - -	1	-	-	-	-	1
Vertigo - - - - -	-	-	-	1	-	1
Deafness - - - - -	-	-	1	-	-	1
Retraction of Testes - - - - -	1	-	-	-	-	1
Amaurosis - - - - -	-	-	-	-	1	1
Retinitis - - - - -	-	-	-	-	1	1
Cystitis - - - - -	-	-	-	-	1	1
Synovitis - - - - -	-	-	-	-	1	1
Pleuritis - - - - -	-	-	-	-	1	1
Chronic Peritonitis - - - - -	-	-	-	-	1	1
Contracted Finger - - - - -	-	1	-	1	-	2
Contracted Left Arm - - - - -	-	1	-	-	-	1
Blindness of Right Eye, from Turbidity of Vitreous Humour - - - - -	-	-	-	-	1	1
Injury of Right Index Finger - - - - -	-	-	-	1	-	1
TOTAL - - -	14	36	12	15	17	94
TOTAL Invalided in 1869 - - -	50	18	11	3	11	{ Dasher } { Jersey } 3=36.

Most of these boys were invalided from Naval Hospitals, where they had been under treatment.

The total number is large, but I expect this cause of waste will be greatly diminished in the current year, greater care having for some time been bestowed upon the examination of recruits. Defects will no doubt occasionally escape the scrutiny of the examining surgeons, but to ensure attention to essential points, I drew up a form for the medical examination of boys, which was approved, and is now in use at all the recruiting stations; this form, when filled up, is sent with the boy to the training ship, and is compared with the examination then made.

In the *Impregnable* the number of boys invalided was only fourteen compared with fifty in the previous year. The large number invalided from the *St. Vincent* is owing, in a great measure, to that ship receiving the largest proportion of the London boys; the cases of organic disease of the heart and of rheumatism (chronic) occurred chiefly in the *St. Vincent* and *Boscawen*, and were therefore probably boys from London. The diseases phthisis and scrofula could scarcely have been developed to any extent when the boy was entered; most likely they existed in a latent state, difficult to detect, or not developed to an extent to justify the rejection of the recruit. I have known many boys who were suspected to have phthisis rapidly improve in health after entry.

The causes of "waste," in addition to death and invaliding, were as follows:—

Desertions—Fifty-one, from which number is to be deducted, "deserters returned" sixteen, reducing the number to	-	-	35
Discharged by purchase	-	-	7
Free discharge	-	-	2
Discharged with disgrace	-	-	1
" as objectionable	-	-	3
" as undesirable	-	-	26
Improperly entered	-	-	2
Making a total of	-	-	<u>76</u>

which, with deaths and invaliding (114), gives a total of 190 lost to the service during the year, or, taking the average number borne at 2,950, the loss is 6·44 per cent.

The following Table shows the total entries and discharges during the year.

TABLE VI.—ENTRY AND DISCHARGE OF BOYS IN TRAINING SHIPS IN 1870.

S H I P.	ENTRIES.										DISCHARGES.													Remaining 31st December 1870.
	Remaining on Board on the 1st of January 1870.	From the Shore direct to Training Ship.	From Coastguard and other Ships.	From Recruiting Stations.	Returned from Sick Quarters (D.S.Q.) (after more than three months in Hospital).	Deserters Returned.	Returned from Prison.	Transferred from other Training Ships.	Total Entries and Transfers.	To Sea Service.	Dead.	Invalided.	Discharged Sick (D.S. Qd.)	Run.	By Purchase.	Free Discharge.	With Disgrace.	As Objectionable.	As Undesirable.	Improperly Recruited.	To Prison.	Transferred to other Training Ships.	Total Discharge ^a and Transfers.	
Impregnable - -	764	457	256	664	4	-	-	23	2,167	586	6	14	2	1	1	1	-	2	-	-	-	770	1,382	758
St. Vincent - -	706	365	369	316	3	18	17	19	1,613	599	5	36	9	15	1	-	1	1	-	-	14	405	1,086	717
Implacable - -	495	182	11	24	1	5	3	372	1,093	431	4	12	1	17	-	-	-	-	23	2	3	75	569	534
Boscawen - -	488	48	25	126	3	2	1	490	1,183	431	3	15	5	13	2	-	-	-	2	-	1	22	494	503
Ganges - -	397	41	-	-	3	1	2	470	904	340	2	17	3	5	4	1	-	-	1	-	4	7	394	536
Total - -	2,840	1,093	661	1,130	14	26	23	1,374	7,160	2,397	20	94	20	61	7	1	1	3	26	3	23	1,280	3,915	3,037

2,384 Entries.

When boys remain in hospital upwards of three months they are discharged from the ship's books ; but as most return to the ship, I have not reckoned this a cause of waste ; they are not completely disposed of till invalided or dead.

The training establishment at Jersey was abolished on the 1st of January 1870 and the boys, about eighty, were sent to the St. Vincent and Boscawen ; the number transferred from other ships is therefore larger than the number transferred to training ships.

Appendix.

N O T E S

ON THE

RELATIVE VALUES OF VACCINATION MARKS,

FROM 2,500 CASES.

BY

EDWARD L. MOSS, M.D., F.R.C.S.E.,

ASSISTANT SURGEON, Royal Naval Sick Quarters, Portland.

NOTES

Appendix.

ON THE

RELATIVE VALUES OF VACCINATION MARKS,
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The Public Services are the only sources from which accurate statistics of re-vaccination can be drawn, for the operation is altogether optional amongst the civil population, and many of those that submit themselves to it are selected by a knowledge of previous imperfect protection, or by that fear which is often an index of peculiar susceptibility. The recent extensive re-vaccinations instituted by the various Government departments have afforded opportunities for observing the results of the operation on an unusually extensive scale.

My limited experience of re-vaccination suggested to me the desirability of endeavouring to ascertain the true relative values of vaccination marks, and a good opportunity offered itself when the re-vaccination of the Navy was directed; for the guard ship, training ships, and Channel Fleet, were then lying in Portland Roads, and I hoped to obtain numbers sufficiently high to be reliable, by combining their cases with those which the medical officers of Portland Convict Establishment courteously gave me opportunities for observing. The Channel Fleet, however, left Portland before many of the arms were mature for inspection, so that the only cases derived from the Fleet were 101 seen on board Her Majesty's ship *Agincourt*, the remainder were obtained from the following sources:—

Achilles, 285; average age, twenty-seven. *Boscawen*'s boys, 670; average age, sixteen. *Boscawen* men, seventy-three; average age, thirty. *Racer*, twenty-eight; average age, thirty. My own re-vaccinations of persons in connection with the hospital, fifty-one; average age, twenty-four. Miscellaneous cases, twenty-one; average age, twenty-one. Officers of Portland Convict Establishment, 140; average age, thirty-nine. Convicts, 1,184; average age, thirty-one. Total, 2,558; average age, 26·6.

Until re-vaccination becomes more general, its records will be considerably influenced by the fact that it is more popular at times when the pandemic tendencies which promote or accompany small-pox epidemics are at their height. Scarletina, measles, and small-pox have been unusually prevalent this year; and I am informed, on good authority, that vaccinations both primary and secondary, have been unusually successful. Other individual sources of statistical variation will be supplied by idiosyncrasy, the time since last vaccinated, the quality of lymph, mode of operation, and last, not least, the unstable estimate of the observer. In the present inquiry, however, such sources of error are not so important as in one aiming at a statement of the positive numbers of successful and unsuccessful re-vaccinations, for the validity of the results will be lessened only by those influences which act unequally on persons possessing different types of previous marks. I have therefore not hesitated to include in the following tables a large number of convicts who were re-vaccinated with lymph diluted with two parts of glycerine, amongst whom failures were 5·2 per cent. more, and perfect vesicles 5·7 per cent. less common than in persons re-vaccinated with pure lymph. Many lesser conditions, hereditary as well as personal, may also influence the liability to variola and vaccina; for example, out of the 2,500

Appendix.

cases examined I noted sixty-eight as being either unusually fair or dark, and found the failures amongst the fair 5 per cent. more common than amongst the dark.

In the annexed tables the various local conditions remaining from previous vaccination have, for brevity's sake, been classified under five headings in the horizontal lines, namely, α =, typical distinctly pitted marks. β , inferior but still fair marks. γ , indistinct, or very small marks. 4th. No marks; and, lastly, deep cicatrices, the result of ulceration or sloughing, indicating the most violent degree of local action. This fifth series might have been as appropriately placed first as last, but it has not been placed in accordance with any theory of value; and it will be seen that the cases classified under it are too few to give support to any such theory. Plurality of scars has been, throughout, considered as increasing their value.

The results of re-vaccination are shown in the perpendicular columns under four headings, viz.:—A. Cases which gave a perfect vesicle on a normally inflamed base. B. Modified vesicle. C. Inflammation without definite evidence of specific action; and, F. Complete failures.

A single inspection after the lapse of seven days was not sufficient to supply materials for a column analogous to the fifth in the horizontal series.

If the occasional mention of "remarkable cases" in our journals is an index of medical opinion, the results obtained below will be thought unusual, for not only were the great majority of secondary vaccination successful, but typical vesicles were produced in half the cases which had previously had both small-pox and vaccina, and even second attacks of the former gave no permanent immunity from the latter.

One hundred and forty-eight cases which had had small-pox, only one, of course, not included in the tables; but I may mention that amongst them the failures were twenty-three, and perfect vesicles 44 per cent. No table is given of persons vaccinated more than twice previously, for their numbers were too low to give reliable results.

There can be little doubt but that other conditions being equal, distinct vaccination marks imply better protection than indifferent ones, and therefore we might expect to find the per-centage of failures becoming less, and of successful cases more frequent as we pass down from the good into the bad groups of previous marks; but, unexpectedly enough, the figures below show exactly the reverse, as the previous marks grow more and more doubtful, so the immunity as a general rule increases; the numbers are probably not sufficiently high to eliminate chance, but the new rule holds good in all three classes of cases, as well as amongst the quaternary vaccinations not tabulated. An explanation would suggest itself if any group of persons were included whose previous vaccination marks were much below the average, and who were also less efficiently re-vaccinated; but the first condition does not exist, and the whole suggestion is negatived by the fact, that the inversion of susceptibility in question was shown in similar tables compiled from each of the sources mentioned above, and of which the annexed tables are the totals, limiting, for example, all the cases derived from the Navy, in which previous vaccination is a condition of entry, and re-vaccination has been conducted in the most efficient manner through two or more scarified surfaces, the per-centage of failures in secondary vaccinations is found to be 12.1 with previous marks of α quality, 13.3 with β , 22.3 with γ , 15.1 with no marks, and only 4.3 with the deep scars, which, as far as local action is concerned, might be placed above the α series.

If this evidence is sufficient to prove that the effects of re-vaccination lessen as the distinctness of the previous marks decline, we must conclude that some other factor not only neutralises the effect of differences in protective power between good and bad marks, but actually inverts the order of figures that such differences tend to produce. When the cause of this inversion is sought for, we find that there are persons practically invulnerable to the virus of vaccina and variola; there are others that give food for these diseases over and over again, and every variety of gradation exists between the two rare extremes. The existence of this range of constitutional susceptibility does not admit of doubt. We know also that the susceptibility when destroyed by vaccination is re-developed in time, and it is in accordance with every biological analogy that the renovated susceptibility should retain its old type. It is evident that such a reproduction would tend to account for the order of figures in the tables, and

it therefore seems reasonable to suppose that the cause of the inversion is to be found in the tendency of idiosyncrasies to reproduce themselves. But if the theory is true, the effect ought to increase as time removes the object from the negative state acquired after successful vaccination, and such is shown to be the case when re-vaccinations amongst persons of different ages are compared, thus in passing downwards through the first four classes of marks amongst the boys of Her Majesty's Ship *Boscawen*. The total increase in the per-centage of failures amounts to only one, whereas amongst the adults examined, it is rather more than ten. From the above considerations, I conclude that a good vaccination mark, though it may afford evidence of that perfect vaccination which gives complete but temporary immunity, is also an index of corresponding constitutional susceptibility.

Appendix.

TABLES showing the Results of RE-VACCINATION in Persons possessing various Classes of previous Marks.

TABLE No. 1.—Cases having had Small-pox and also having been once previously Vaccinated.

	Results of Re-vaccination.				TOTALS.	Per-centage of Perfect Vesicles.	Per-centage of Failures.
	A.	B.	C.	F.			
Previous mark - - - α	60	16	11	33	120	50·	27·4
" " - - - β	23	12	13	12	60	38·3	20·
" " - - - γ	38	16	11	25	90	42·2	27·7
No mark - - -	9	3	2	8	22	40·9	36·3
Deep cicatrix - - -	9	1	2	2	14	64·2	14·2
TOTALS - - -	139	48	39	80	306	45·	26·1
Average years since small-pox or vaccina - - -	23·6	18·4	21·3	15·1			

TABLE No. 2.—Cases having been Vaccinated once before.

	Results of Re-vaccination.				TOTALS.	Per-centage of Perfect Vesicles.	Per-centage of Failures.
	A.	B.	C.	F.			
Previous mark - - - α	551	151	84	165	951	57·9	17·3
" " - - - β	188	87	43	65	383	49·	16·9
" " - - - γ	164	69	37	90	360	45·5	25·
No mark - - -	48	21	6	20	95	50·5	21·
Deep cicatrix - - -	20	18	4	11	53	37·7	20·3
TOTALS - - -	971	348	174	351	1,842	52·7	19·
Average years since vaccination - -	26·	25·8	24·3	26·2			

TABLE No. 3.—Cases having been Vaccinated twice previously.

					Results of Re-vaccination.				TOTALS.	Percentage of Perfect Vaccines.	Percentage of Failures.
					A.	B.	C.	F.			
Previous mark	-	-	-	α	36	16	10	15	77	46.7	19.5
" "	-	-	-	β	14	10	7	8	39	35.9	20.5
" "	-	-	-	γ	10	3	6	13	32	31.2	40.6
No mark	-	-	-	-	1	3	1	-	5	20.	—
Deep cicatrix	-	-	-	-	2	2	-	-	4	50.	—
TOTALS	-	-	-	-	63	34	24	36	157	40.1	22.9
Average years since last vaccinated	-	-	-	-	5.3	9.7	3.5	4.			

